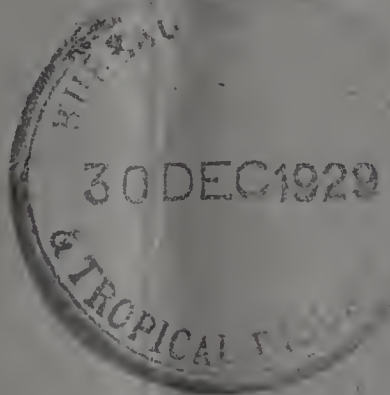




TRIENNIAL REPORT  
ON  
VACCINATION IN BURMA  
FOR THE YEARS 1926-27 TO 1928-29



Rangoon

Supdt., Govt. Printing and Stationery, Burma

1929

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# RESOLUTION

ON THE

## Triennial Report on Vaccination in Burma

For the Years 1926-27 to 1928-29.

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Extracts from the Proceedings of the Government of Burma, Public Health Department,—No. 253S29 (R.N. 505), dated the 30th September 1929.

READ—

The Triennial Report on Vaccination in Burma for the years 1926-27 to 1928-29.

RESOLVED THAT—

The Report be published.

By order.

F. H. STEAVENSON,  
*Secretary to the Government of Burma,  
Education Department.*



[The maximum limit of the body of the Report is eleven pages,]

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# TRIENNIAL REPORT

## ON

# Vaccination in Burma

For the years 1926-27 to 1928-29.

*General Review.*—It is a hopeful sign that while the deaths from small-pox in the Province during the triennium under report are less than those recorded in the previous triennium, as will be seen from the figures noted below, the output of vaccination recorded exceeded that of the previous two periods :—

Years. (1)	Small-pox.		Output of vaccination.		Total. (6)
	Attacks. (2)	Deaths. (3)	Primary. (4)	Revaccination (5)	
1923-24 ...	9,725	2,839	544,341	208,106	752,447
1924-25 ...	9,205	3,312	531,035	275,584	806,619
1925-26 ...	10,050	3,623	557,442	285,287	842,729
Total ...	28,980	9,774	1,632,818	768,977	2,401,795
1926-27 ...	5,035	2,233	511,750	208,801	720,551
1927-28 ...	8,282	2,452	550,154	320,248	870,402
1928-29 ...	7,137	2,419	608,414	330,864	939,278
Total ...	20,454	7,104	1,670,318	859,913	2,530,231

The incidence of small-pox during the present triennium is less than in the previous triennium. Thus in 1926-27, 2,233 deaths from small-pox were recorded. The deaths increased in the following year to 2,452 and in 1928-29 were slightly less than in the previous year 2,419 deaths. The output of vaccination work in the current triennium rose steadily year by year as is shown in the above table. The most satisfactory feature is that there is an increased output of both primary and re-vaccinations every year of the triennium, establishing a record during the year 1928-29.

The steady increase in the output during the six years (save 1926-27), is partly due to the extension of compulsory Vaccination Acts to rural areas and partly to better appreciation by the people of the benefits conferred by vaccination. Nowhere is there serious opposition to vaccination except in a few backward and primitive tracts and even in these areas, the people willingly submit to vaccination when faced with small-pox outbreaks. Several District Health Officers in Lower Burma have reported that vaccinations and revaccinations are more appreciated by Karens than by other classes ; and that parents, specially in the

more remote areas are reluctant to have their children vaccinated before the end of the first year. With the increasing propaganda work now being carried out by the Public Health and Vaccination Staffs, there is some prospect of vaccination improving still further, but more efficient supervision of the work is greatly needed and must await the urgently needed development of a rural public health service.

During the triennium, the Vaccination Acts were extended to two more districts, *viz.* Mandalay from March 1927 and Shwebo from January 1929. These Acts have now been extended to the Lower Chindwin District from April 1929 and it is hoped that the District Council of Sagaing and others will follow suit. The beneficial results on deaths from small-pox of the extension of the Vaccination Acts are clearly brought out in the following table, which indicates the need for extension of these Acts to those districts whose Councils have not yet adopted compulsory primary vaccination and have therefore neglected to avail themselves of the means at their disposal for checking the ravages of this serious disease. Great credit is due to the District Councils of Tharrawaddy and Thayetmyo for their pioneer work in this respect.

*Districts where Vaccination Act was extended in 1923.*

(Deaths from Small-pox).

Districts.	5 years before extension.					Total.	Death rate.	5 years after extension.					Total.	Death rate.
	1919	1920.	1921.	1922	1923.			1924	1925.	1926.	1927.	1928.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Tharrawaddy	11	12	26	23	16	88	...	3	17	3	2	4	29	...
Thayetmyo ...	105	144	19	11	121	400	...	132	6	14	29	74	255	...
Population—3,281,992	...	...	...	...	...	488	15	Population—3,412,095					234	08

*Districts where Vaccination Act was not extended.*

(Deaths from Small-pox).

Kyaukpyu ...	9	32	...	99	...	140	...	...	33	...	...	1	34	...
Sadoway ...	4	31	12	41	10	98	...	47	11	12	...	6	76	...
Pakôkku ...	74	30	5	...	109	218	...	89	94	36	44	56	319	...
Meiktila ...	57	36	26	...	61	180	...	96	151	21	22	8	298	...
Myingyan ...	362	130	53	22	64	631	...	192	613	550	83	100	1538	...
Yamèthiñ ...	7	22	...	1	3	33	...	28	88	20	20	87	243	...
Sagaing ...	259	49	31	21	17	377	...	144	284	80	44	100	652	...
Population—9,977,491 (5 years)	...	...	...	...	...	1677	17	Population—10,269,144 (5 years).					3160	31



2. *Total Operations.*—The total number of operations performed during the triennium was 2,530,231, as compared with 2,401,795 in the previous triennium, an increase of 128,436 operations—and of 511,837 on that of the triennium 1920-21 to 1922-23. Out of 41 districts, 23 show an increase and 18 a decrease. The district which returned the largest increase is Akyab, in which 56,759 more operations were recorded than in the previous triennium, almost entirely re-vaccinations—the gain under this class of vaccination being 54,286. In this district the presence of small-pox was the inducement for the increase. In 1926-27 the number of deaths recorded from small-pox was only 34; it rose to 162 deaths in 1927-28, and was serious in 1928-29, when 526 deaths were registered. Simultaneously with the rise in small-pox deaths, the output of vaccination rose from 20,786 in 1926-27 to 46,351 in 1927-28 and 64,250 in 1928-29. The next district which returned a notable increase is Prome with an excess of 31,325 over the figure of the previous triennium. In this district also small-pox was present throughout the triennium and more prevalent than in the previous triennium. The Deputy Commissioner, Prome (Mr. Stanford) attributed the increase and improved state of vaccination to the appointment of an Assistant District Health Officer, Dr. Chit Twe, to the keenness of the District Health Officer, Major Hamlin, and to the supervision and great interest taken by both in vaccination and public health matters. Mr. Stanford ascertained that for six years previously, certain villages had not been visited by the vaccinators and that their diaries were falsified. The recent stimulus to vaccination in this district is largely due to his personal interest in vaccination as in all matters affecting the health of the people. The third place in which a large increase is noticed is Rangoon, where 25,018 more operations were performed than in the previous triennium, although the incidence of small-pox was less. The other districts which returned appreciable increases are Magwe (+23,414), Toungoo (+22,574), Amherst (+20,623), Southern Shan States (+19,509), Shwebo (+15,138), Yamèthin (+14,643) and Pegu (+12,497). In all these districts small-pox was prevalent more or less constantly. This disease is the chief stimulant for people to submit to vaccination readily, as illustrated in the case of the districts mentioned above, and particularly in the case of the Magwe district. In this district (rural areas) there were three deaths from small-pox in 1926-27. In the month of March 1927, there was a sudden severe outbreak of small-pox in Taungdwingyi Town, resulting in 51 deaths from the disease in that month. The outbreak lasted up to June taking a toll of 190 deaths in four months and from this place it spread into the rural areas of the district, where 145 deaths occurred in different villages in 1927-28. This spread of the disease aroused the district authorities who appointed additional temporary Vaccination Staff in that year and vaccination and revaccination were carried out vigorously. The output of vaccination in the district rose from 19,616





in 1926-27 to 43,021 in 1927-28. In the last year of the triennium 1928-29 the outbreak subsided, only 51 deaths being registered and simultaneously the output of vaccination went down to 27,693.

Of the 18 districts which recorded a decrease, Pakôkku topped the list with a deficit of 23,004. The reasons furnished by the District Health Officer were a reduced incidence of small-pox and non-employment of additional temporary staff, whereas in the previous triennium small-pox was more prevalent and additional temporary staff was entertained to cope with it. The steady decline in this district since 1924-25 up to 1927-28 requires further elucidation. In 1923-24, the output recorded was 34,351; it went down to 26,914 in 1924-25 and from this year onwards the decline is continuous up to 1927-28. In 1925-26 the output was 24,822, in 1926-27, 20,780 and in 1927-28, 20,477. There was only a slight rise in 1928-29, *viz.* 21,826 or an increase of 1,349 over the previous year's output. A very unsatisfactory feature is the reduction in primary vaccination.

The next district which returned a large deficit is Upper Chindwin—20,358 fewer operations were recorded. Absence of serious outbreak of small-pox, economy exercised in lymph supply, difficulties of communications and of transport and unwillingness on the part of the people to submit to vaccination during non-epidemic years are stated to be the main causes of the decline; but as stated in the Notes and Statistics on Vaccination in Burma for 1927-28 and as pointed out by the District Health Officer and the Deputy Commissioner the inadequacy of Vaccination Staff may be another reason for the unsatisfactory state of vaccination work in this district. The area of the district is large, some 16,000 square miles, communication is very difficult and most of the people ignorant and backward. Here also there has been a falling off of primary vaccination as well, since the serious small-pox epidemic of 1925-26.

The other districts which recorded large deficits are Myingyan (—14,796) (mainly in re-vaccinations), Sagaing (—14,715) Minbu (—14,635) Ma-ubin (—9,983), Thatôn (—9,294) (all re-vaccinations—primary vaccinations showing an increase), Kyaukpyu (—7,394), Insein (—7,207), Kyauksè (—6,859) and Sandoway (—5,460); but it is encouraging to note that in nearly all these districts the output in the year 1928-29 was more than that of either of the previous years of the triennium. The deficit in other districts calls for no comment.

#### Statement I.

3. *Primary Vaccination.*—A total of 1,670,318 primary vaccinations was recorded during the triennium under report, as compared with 1,632,818 in the previous triennium or an increase of 37,500 operations. In 24 districts there is an increase and in 17 districts a decrease. In four districts only a marked increase occurred, *viz.*, Prome (+ 19,394), Southern Shan States (+ 10,965), Toungoo (+ 10,273) and Amherst (+ 9,580). An increase of over 5,000 primary



operations was registered in the Chin Hills and Katha districts. In the remaining 18 districts the increase is not marked. The increase recorded in the Southern Shan States is commendable, in view of the fact that people in this area are very ignorant, there are difficulties in communication and the villages are widely scattered.

In the 17 districts from which a deficit is returned in primary operations, Mandalay stands at the top of the list with 9,095 fewer operations followed by the Upper Chindwin with a deficit of 7,685. A deficit of over 5,000 is reported from Insein and Henzada, over 4,000 from Kyaukpyu, Myaungmya and Ma-ubin and over 3,000 from Sadoway, Myingyan and Sagaing. The decrease in primary cases in Myaungmya, Pyapôn, Mergui and Lower Chindwin is covered by the increase in re-vaccination cases in these districts. In the remaining districts there is a decrease under both classes of vaccinations and these are the same districts in which a large deficit in total operations is recorded, as noted in paragraph 2 above.

4. *Successful Primary Operations.*—During the triennium, 1,509,029 Statement L successful primary operations were recorded as compared with 1,538,221 in the previous period—a deficit of 29,192 successes. The decrease was solely due to unsatisfactory results obtained in 1927-28 in which year only 92·16 per cent. of primary cases were reported as successful.

With the exception of Akyab, Rangoon, Thatôn, Meiktila and Southern Shan States, the same districts which returned a decrease in primary operations also returned a decrease in successful cases. Akyab district which returned an increase of 2,473 in primary operations during the triennium, recorded a deficit of 2,834 in primary successes. Similarly Rangoon which recorded an increase of 196 in primary operations showed a deficit of 2,461 successes. Thatôn follows the above two places but the loss in successful cases is only 93. In the case of Minbu, a gain of 1,663 successes was recorded in contrast with a loss in primary operations of 2,186. Meiktila and Southern Shan States show fairly large deficits. The loss sustained in primary successes in the former district was 1,858 and in the latter 6,015.

The provincial percentage of success in primary cases in 1928-29 was 97·11, as compared with 92·16 in 1927-28 and 96·63 in 1926-27. With the exception of a few distant places, such as the Hill District of Arakan, Sandoway, Mergui and Chin Hills, the percentages of success recorded in the remaining districts in 1928-29 compare very favourably with those recorded in 1927-28. Myaungmya district returned cent. per cent. primary successes, closely followed by Tharrawaddy with 99·98 per cent. and Ma-ubin with 99·88 per cent. Other districts which recorded over 99 per cent. success rate are Prome, Henzada, Pyapôn, Amherst, Toungoo and Kyaukse. Over 98 per cent. of successes were reported from Rangoon, Bassein, Magwe, Sagaing, Katha and Northern



Shan States and a success rate below 98 per cent. but above 95 per cent. was recorded in Hanthawaddy, Insein, Thatôn, Tavoy, Minbu, Mandalay, Myingyan, Yamèthin, Shwebo and Southern Shan States. In the remaining districts which are not mentioned here, the success rates vary between 90 and 95 per cent. On the whole, the success rate obtained in 1928-29 in all the districts, with the exception of the four remote ones mentioned above, is very satisfactory.

The district which reported the lowest success rate is Chin Hills (82.75 per cent.), but the lymph takes ten days to reach there from Meiktila and hence the potency is partly lost during transit. The low success rate of 86.35 per cent. in Sandoway District is partly due to poor communications and partly to unwillingness on the part of the people to have three insertions on the arms of the children. The matter is receiving the attention of this Department and an Epidemic Sub-Assistant Surgeon has been detailed to the district to carry out vaccination propaganda work and also to supervise the work of vaccinators. Mergui also reported a low success rate of 85.76 per cent. Here also communications are bad.

**Statement I.**

5. *Re-vaccination.*—The total number of re-vaccinations recorded during the triennium was 859,913 as against 768,977 in the previous period—an increase of 90,936. Judging from this increase in spite of lessened incidence of small-pox during the period under report, it may be concluded that the people in general are beginning to realize the benefit of double vaccination—once at infancy and again at the age of about ten years,—as a means of protection from small-pox throughout life.

In 23 districts, there was an increase in re-vaccinations and in 18 a decrease. The increase in Akyab was the greatest in the Province, amounting to 34,286 cases. In this district the number of re-vaccinations rose from 3,525 in 1926-27 to 25,858 in 1927-28 and to 40,075 in 1928-29, making a total for the triennium of 69,458 as against only 15,172 in the previous period. The other districts which returned substantial increases are Rangoon with an excess of 24,822, Magwe (+21,522), Shwebo (+12,678), Toungoo (+12,301), Prome (+11,931), Yamèthin (+11,490), Amherst (+11,043) and Pegu (+9,999). An increase of over 8,000 cases was reported from Southern Shan States, over 7,000 from Northern Shan States, over 6,000 from Myaungmya and over 5,000 from Salween districts.

Of the 18 districts in which a reduction in re-vaccinations is recorded in the triennium, Pakkôku stands first, 20,295 fewer cases being reported. As the low output of work as a whole in this district has already been commented upon above, it is unnecessary here to make further comments.

The deficit in other districts in order of sequence is Upper Chindwin (−12,673), Minbu (−12,449), Thatôn (−12,127), Sagaing (−11,120), Myingyan (−11,110), Kyauksè (−8,775), Katha (−6,195) and Ma-ubin.



(-5,630). In the above districts, with the exception of Thatôn and Myingyan, the prevalence of small-pox was low and hence the reduction in re-vaccination.

In Thatôn district, although the number of deaths from small-pox recorded during the current triennium is slightly higher than that recorded in the previous period, re-vaccination work shows a marked decline.

In Myingyan district, the incidence of small-pox during the two periods is about the same, but re-vaccination work shows a serious falling off, with the result that the disease has apparently gained a strong foothold and is still prevalent, both in town and district. The Vaccination Acts are not in force in this district and the Local Authorities are reluctant to extend them, although the necessity for doing so has been urged on them by this Department. The District Council, in my opinion, must bear a share of responsibility for the serious outbreak of small-pox which has recently occurred.

The percentage of success in re-vaccination in 1928-29 was 36·22 as compared with 39·88 in 1927-28 and 35·97 in 1926-27. A high percentage of successful re-vaccinations was reported from Bassein town 95·80. It may be noted that in the Northern Shan States, vaccination work is carried out for only six months in the year from October to March. The District Health Officer suggests altering this system.

6. *Vaccination in Towns.*—In the 73 towns to which the Vaccination Acts have now been extended, as compared with 63 towns in the last triennium, a total of 401,691 operations was performed during the triennium. This compares with 363,414 in the previous period. Of the total operations, 148,217 were primary and 253,474 re-vaccinations, as against 138,923 and 224,491 respectively, in the previous triennium. The increase in primary vaccination was not very large, amounting to 9,294 operations, but in re-vaccination, an excess of 28,983 operations was recorded over that of the previous period. The percentage of success for the triennium in primary vaccinations was 95·20 and in re-vaccination 44·35, as compared with 98·80 and 51·60 respectively in the previous period.

The total number of operations performed in towns during 1928-29 was 130,705, *i.e.*, 42,985 fewer operations were performed than in 1927-28. Only in 29 towns was there an increase. The decrease in the output during 1928-29 was chiefly due to a great falling off in re-vaccination work in Rangoon town, where only 29,253 re-vaccinations were done as against 82,992 in 1927-28 or a decrease of 53,739. The towns which showed a decrease in the output other than Rangoon in order of sequence were Moulmein (-2,083), Toungoo (-2,025), Taungdwingyi (-1,666), Syriam (-1,489) and Pegu (-1,274). In Moulmein and Syriam, the deficit was wholly due to fewer re-vaccinations. In Toungoo, Taungdwingyi and Pegu, the deficit is noticeable under both classes of vaccinations.



7. *Re-vaccination in Towns.*—78,202 re-vaccinations were performed in towns during 1928-29, as compared with 124,391 in 1927-28—a decrease of 46,189. The towns returning an excess are Mandalay, Mònywa and Meiktila.

It is gratifying to note that since the enactment of the Burma Vaccination Law Amendment (Amendment) Act of 1928 (Burma Act IV of 1928) enabling Municipal and Town Committees to frame rules for making re-vaccination compulsory in their respective areas, such rules have been framed by the Municipal Committees of Pegu, Prome, Mònywa and Syriam and the Town Committees of Zigôn, Thingangyun and Kanbe, and it is hoped that other Municipal and Town Committees will soon follow suit.

Appendix B.

8. *Infant Vaccination in Towns.*—In the 73 towns mentioned in the previous paragraph, the total number of births registered during 1928-29 is 37,593, out of which 11,306 infants died before attaining the age of one year, thus leaving 26,287 survivors available for vaccination. The total number of children under one year successfully vaccinated in these towns during the year was 32,707 or 6,420 children in excess of the available survivors for the year. The excess over the available survivors vaccinated in Rangoon and Mandalay towns was unusually large. In the former town 1,709 infants were thus vaccinated in excess of the surviving children and in the latter town 2,547.

In 18 towns, *viz.*, Pegu, Nyaunglebin, Tharrawaddy, Thônzè, Minhla, Insein, Thamaing, Kamayut, Prome, Bassein, Ma-ubin, Danubyu, Pyapôn, Moulmein, Thayetmyo, Mandalay, Kyauksè and Myinmu (Sagaing District), the number of children under one year successfully vaccinated exceeded the total number of births registered. This may be due to defective registration of births, and careless upkeep of vaccination registers. The number of children successfully vaccinated exceeding the survivors available for vaccination was in Tavoy 136, in Meiktila 119, Pyinmana 120 and Myinmu 112.

In 34 towns, the number of infants successfully vaccinated was less than the survivors available; Ye-u town is the worst in this respect; of the 109 infants available for vaccination, only 9 were successfully vaccinated, thus leaving 100 children unprotected from small-pox by vaccination—a very unsatisfactory state of affairs. The next place is Myitkyina, in which 173 children were available for vaccination, and of which only 27 were successfully vaccinated, the rest (146 children) being left unprotected. The same remarks apply to Lashio and Taunggyi towns, but as to all these towns the Vaccination Acts were only very recently extended, perhaps the lack of powers is the chief reason for the smaller number of children submitted to vaccination. In Pyu town, 201 survivors were available for vaccination, of which only 43 were successfully vaccinated. The remaining cases were reported as either having left the town or vaccination postponed on medical grounds. In



Toungoo, only 269 children were successfully vaccinated out of 425 survivors and in Shwegyin only 59 were vaccinated out of 161. The reasons given were the same as for Pyu. In Akyab, 100 children were thus left unprotected, in Thôngwa 130 and in Thatôn 110. No reasons are forthcoming for the deficits in the vaccination reports submitted from these towns.

The various reasons for the excess or deficit in infant vaccinations noted above have been discussed in previous reports; the most important being defective registration of births, defective upkeep of vaccination registers, migration of children, postponement of vaccination on medical grounds and non-employment of proper vaccination and supervising staffs. The employment of whole-time Health Officers with adequate powers in these towns seems to be the only solution of the problem.

9. *Dispensary Vaccination*.—In previous years, vaccination operations performed in hospitals and dispensaries were shown separately in Appendices attached to the Annual Reports as Statement No. III. In the Report under review, these operations have been included in the main Statement No. 1 at the instance of the Government. In effecting this change, Public Health Department Circular No. 10, dated 31st December 1928, was issued to all District Health Officers and Health Officers giving instructions in the preparation of these statements. Statement I  
(Summary).

During the triennium 23,859 operations were performed in hospitals and dispensaries, of which 17,082 were primary and 6,777 re-vaccinations, as compared with 23,884 (primary 14,474 and re-vaccination 9,410) in the previous triennium.

In the year 1928-29, dispensary vaccination figures were reported from 15 districts only. As in previous years the bulk of dispensary vaccination work was done in Myitkyina district, in which 3,371 operations were performed; while over 1,000 operations were reported from Tharrawaddy, Northern Shan States and Southern Shan States. The success rate in primary was 99·45 and in re-vaccination 43·31 per cent. This is an indication perhaps that dispensary vaccination is not popular or that the dispensary staff has no time for this work, which would be better done by whole-time vaccinators under the control of whole-time District Health Officers and Inspectors of Vaccination.

10. *Jail Vaccination*.—In Jails 32,585 operations were performed, of which 1,109 were primary and 31,476 re-vaccinations. Of primary cases, 897 were successful and of re-vaccinations 16,790, yielding success rates of 80·88 and 53·34 per cent. respectively.

11. *Vaccination by Private Practitioners*.—During 1928-29 medical practitioners performed 372 primary and 505 re-vaccinations, with a success rate in the former of 97·53 and in the latter of 26·75 per cent. The total number of children under one year successfully vaccinated by them was 192 and between one and six years—122.



12. *Steamer Vaccination.*—Under the provision of the Burma Vaccination Law Amendment Act of 1909 and the further Act of 1928, 186,966 labourers landing at the Port of Rangoon were vaccinated during 1928-29 by the Corporation Vaccination Staff under the supervision of Port Health Department, as against 44,937 in 1927-28. The results are unknown, as all of them were allowed to proceed to their destination after operation.

13. *Verification work of Inspecting Officers.*—During the year 1928-29, 946,761 persons were vaccinated. The District Health Officers and Assistant District Health Officers claimed to have inspected the results of 98,926 or 10·45 per cent. (or the average minimum expected—10 per cent.) as against 74,374 or 8·74 per cent. in 1927-28 and 60,661 or 8·38 per cent. in 1926-27 ; thus there was an improvement on the work of the previous two years by these officers. Out of 41 districts, the total number of cases inspected by the District Health Officers in 12 districts, *viz.*, Pegu, Prome, Ma-ubin, Amherst, Tavoy, Magwe, Chin Hills, Mandalay, Meiktila, Sagaing, Katha and Northern Shan States is worthy of mention. Of these 12 districts, the number of cases inspected by the District Health Officer, Northern Shan States, topped the list with 11,681 or 28·00 per cent. of the total number of persons vaccinated in the district, followed by Magwe with 7,937 or 28·65 per cent. The work of the District Health Officer, Amherst, comes third, with 6,971 cases inspected or 13·53 per cent. The inspection work of the remaining nine District Health Officers in order of precedence of total number of persons inspected is Katha 5,553, Tavoy 5,086, Pegu 4,381, Ma-ubin 4,053, Meiktila 3,840, Chin Hills 3,584, Prome 3,086 and Mandalay 2,934. The work of the District Health Officer, Chin Hills District (Dr. Ottman) is highly commended by the Deputy Commissioner who writes "The district is fortunate in having a Civil Surgeon who devotes so much of his time to touring the villages and helping the people. Great improvement in vaccination is due to closer supervision and personal verification in his extensive tours by the Civil Surgeon." The inspection work done by the District Health Officers of Tavoy and Katha is especially commendable in view of many difficulties prevailing in these districts. In the former district, 60·68 per cent. of the total number of persons vaccinated and in the latter 38·36 per cent. were inspected. In Prome and Meiktila districts a large number of cases was inspected by the Assistant District Health Officers. In Myingyan district and Southern Shan States, no vaccination cases were inspected by the District Health Officers. The reasons for this are being enquired into. District Health Officers of districts having large hospitals to attend to and often large jails in addition, cannot be expected to do much touring in their districts, but whenever they do tour, vaccination inspection should form part of their work. The District Health Officer, Hill District of Arakan, inspected the results of only 56 out of a total of 2,069 cases.



Reviewing the work of Inspectors of Vaccination and other inspecting officers in rural areas of the districts, the work done in Tharrawaddy, Amherst, Magwe, Yamèthin, Sagaing and Lower Chindwin Districts is worthy of mention. In each of these districts, only a single Inspector of Vaccination is employed, yet they inspected a larger number of cases than the Inspectors of any other district. In Tharrawaddy, the results of 63·88 per cent. of the total vaccinations were inspected by the Inspector of Vaccination. The Inspector of Amherst inspected 32·45 per cent., Magwe 45·19 per cent., Yamèthin 40·13 per cent., Sagaing 62·29 per cent. and Lower Chindwin 46·70 per cent. In the districts in which two Inspectors are employed *viz.*, Pegu, Insein, Hanthawaddy, Prome, Bassein, Henzada, Myaungmya, Ma-ubin, Pyapôn, Tòungoo, Thatôn and Katha, the work done by the Inspectors of Pegu, Myaungmya, Ma-ubin and Pyapôn should be regarded as satisfactory as each inspected the results of over 10,000 vaccinations. In the Report for 1927-28, the work of the two Inspectors in Thatôn district has been criticised and in that year each of them verified the results of 5,294 vaccinations. During 1928-29, they inspected 6,531 each—an increase of 1,237. Comparing the work of Inspectors of districts mentioned above, the work done by the Inspectors in Hanthawaddy, Insein, Prome, Bassein, Henzada and Tòungoo is inadequate. In Hanthawaddy, each Inspector verified 6,045, Insein 4,962, Prome 5,220, Bassein 5,918 and Henzada 7,643.

Considering the conditions under which the Inspectors have to do their work, those Inspectors employed in the Salween, Pakôkku, Chin Hills and Upper Chindwin Districts have done creditably, as they managed to verify a large percentage of the cases vaccinated. It may be mentioned here that the inspection work involves not only the actual inspection of the children vaccinated, but also of the various registers, forms and foils maintained by the Ward headmen and Vaccinators, of the equipment of the vaccinator and of the various methods employed for finding out unregistered and unvaccinated children.

The District Health Officer, Insein and Hanthawaddy, reports that though people are willing to have their children vaccinated, they consider it a nuisance to take them again for verification by the District Health Officer or Inspecting Officers, and that Ward-headmen have lost their influence and prestige and are indifferent to sanitary and public health matters.

An interesting system is followed by the District Health Officer, Pakôkku, who instructs his Vaccinators to make an entry of each case in the Headmen's Birth Registers and initial it with date, so as not to lose sight of any registered birth. One or other of the following entries is made—(1) successfully vaccinated, (2) vaccinated, but not successful, (3) sick, (4) died, (5) absent, (6) under age, (7) parents opposed to vaccination. At their next visit they have to search for and vaccinate all children under (2), (3), (5), (6) and 7.



Statement II.

14. *Establishment*.—The strength of the Vaccination Staff employed during the years of the two triennial periods is shown in the following Table :—

Year. (1)	District Superintendents of Vaccination. (2)	Part-time Supervising Officers.		Inspectors of Vaccination. (5)	Head Vaccinators. (6)	Vaccinators. (7)
		S.A.S. (3)	P.H.I. (4)			
1923-24 ... ..	41	36	...	44	1	339
1924-25 ... ..	41	27	6	43	1	342
1925-26 ... ..	41	27	8	44	1	365
Average ... ..	41	30	5	44	1	349
1926-27 ... ..	41	28	9	42	1	377
1927-28 ... ..	41	28	11	43	1	384
1928-29 ... ..	41	31	13	42	3	385
Average ... ..	41	29	11	42	2	382

The number of Sub-Assistant Surgeons receiving vaccination allowance, and employed in the Department as part-time Supervising Officers in 1928-29, was 31, as against 28 in each of the two preceding years; and that of Public Health Inspectors 13, as compared with 11 in 1927-28 and 9 in 1926-27. The cadre of Inspectors of Vaccination was 42 as against 43 in the previous year. The decrease of one was due to the death of one Inspector of Vaccination in Bassein District, his place being filled by appointing a Public Health Inspector. During the year three Head vaccinators were employed as against one in the former year. The increase was due to the post of Head Vaccinator left vacant in Karenni State, having been filled by promoting a senior vaccinator and the creation of a new post in Loimwe Subdivision.

Seven new posts of vaccinator were created during the year, *viz.*, one each in the districts of Pegu and Northern Shan States, two in Shwebo, one each in the towns of Chauk, Taunggyi and Thingangyun *cum* Kanbè. The six additional temporary vaccinators employed in Magwe district in 1927-28 were dispensed with in 1928-29.

Seventeen additional temporary vaccinators were employed for varying periods from one to six months in Amherst, Yamèthin, Meiktila, Myingyan, Shwebo and Lower Chindwin Districts, and in Mandalay and Rangoon towns.

During 1928-29, one Inspector in Toungoo district was invalided on medical grounds and two Inspectors—one in Sandoway and another in Bassein—died. Four vaccinators—one each in Myaungmya, Magwe, Myingyan and Bhamo—resigned the service and four vaccinators—one each in Tharrawaddy, Thatôn, Bhamo and Loimwe Subdivision of



Southern Shan States were removed or dismissed from the Service, while seven vaccinators, one each in Prome town and in the districts of Pegu, Thatôn, Pakôkku, Shwebo, Katha and Southern Shan States, died.

15. *Cost of Department.*—The cost of the Department shown in Statement II as Rs. 4,29,062-6-0 includes Rs. 36,215-11-0 paid by Local Bodies as price of lymph supplied to them by the Vaccine Depôt, Meiktila. The expenditure of the Department on the production of the lymph is also added to this total so that duplication of cost has resulted. Deducting therefore Rs. 36,215-11-0 which was really a receipt by the Government Department, there was an expenditure of Rs. 3,92,846-11-0, as against Rs. 4,03,228-12-3 in 1927-28 and Rs. 3,86,245-10-1 in 1926-27. The increase under the head "Pay of the Establishment" was Rs. 9,621-2-2 due to increments of pay. There was a decrease of Rs. 3,264-10-6 under the head "Travelling Allowances" due to the introduction of the new travelling allowance rules.

The average cost per successful case of vaccination was Rs. 0-9-7 as compared with Rs. 0-11-1 in 1927-28 and Rs. 0-11-7 in 1926-27. The cost per successful case is highest in the Pakôkku Hill Tracts, *viz.*, Rs. 2-9-3. The other districts and town which returned high rates are the Hill District of Arakan Rs. 1-6-8, Rangoon Town Rs. 1-6-0, Upper Chindwin District Rs. 1-3-7, Hanthawaddy and Salween Districts each Rs. 1-3-3, Insein District Rs. 1-1-6 and Mergui District Rs. 1-0-2. The high cost per case in undeveloped hill districts is inevitable, whilst in Insein and Hanthawaddy the paid Inspecting Staff is greater than elsewhere and their salary and travelling allowance swell the rate. In Rangoon, out of a total of 39,215 operations less than 10,000 were primary cases and nearly 30,000 were re-vaccinations. Only 7,324 of the re-vaccinations were recorded as successful. Besides, 186,966 immigrants were vaccinated at the wharf and the results of these are unknown, but a large staff has to be maintained for this purpose; their salaries and the heavy contingent expenditure on lymph, medicines etc., increasing the rate per successful case. In Mergui District 2,179, *i.e.*, about a quarter of the cases vaccinated were re-vaccinations and of these only 816 were successful, while 510 were secondary vaccinations. A low cost per successful case was recorded from Yamèthin District (Rs. 0-5-0), Sagaing District (Rs. 0-5-1) and Akyab District (Rs. 0-5-5). In Meiktila District the cost was Rs. 0-6-0, Northern Shan States Rs. 0-6-3 and Prome Rs. 0-6-5.

16. *Small-pox Inoculation.*—Although the practice of small-pox inoculation is prohibited by law in all the districts in the Province, it is still occasionally found in certain districts resulting in outbreaks of small-pox. Thus in the Dedayè Township of Pyapôn District, one inoculator inoculated 86 persons, among whom 37 contracted small-pox and two died; and in Kyaiklat Township, another inoculator operated on 15 persons, all of whom contracted small-pox, while one died. These two inoculators



along with the parents of the inoculated children were prosecuted and the Saya who performed inoculation at Dedayè was sentenced to six week's rigorous imprisonment while the other Saya at Kyaiklat was fined Rs. 25. The six parents were fined Rs. 20 each. Another inoculation case was pending in the Court at the close of the year. In Henzada 145 prosecutions were launched for inoculation and 129 parents along with the inoculators were fined. The fines realized amounted to Rs. 900. Four Headmen were also fined Rs. 25 each, for connivance in inoculation. In Toungoo District 112 persons were prosecuted and all were fined except one. In Lower Chindwin District, the inoculator and the Headmen were fined Rs. 20 each. In Yamèthin District, three parents of inoculated children were prosecuted and two were fined Rs. 25 each and one Rs. 15. Cases of prosecution for small-pox inoculation in Tharrawaddy were pending in the Court at the close of the year and in Akyab the offenders escaped conviction for want of evidence.

17. *Prosecutions under the Vaccination Acts.*—The districts which reported prosecutions for infringement of Vaccination Acts were Hanthawaddy, Myaungmya, Pyapôn, Amherst, Thatôn and Mergui and the towns were Moulmein, Mandalay and Kawkareik. In all, 159 prosecutions were launched and most of the offenders were fined. In view of the vaccination prosecution cases from Pyapôn having been thrown out on appeal by the High Court because of the wrong application of certain sections of the Vaccination Acts, a Circular was sent to all District Health Officers and Health Officers, drawing their attention to the High Court judgment. For the same reason, revisions and amendments of the relevant forms have been undertaken and proposals sent up to Government for sanction. Some District Health Officers have drawn attention to the difficulties encountered in rural areas in enforcing the provisions of the Vaccination Act, 1880, regarding preliminary formalities prior to prosecution. In this connection, the Commissioner, Irrawaddy Division, strongly recommends that the Vaccination Acts should be consolidated and a Vaccination Manual issued.

18. *Work of the Vaccine Dépôt, Meiktila, during 1928-29.*—The Calf Hospital attached to the Dépôt was flyproofed and converted into a post-scraping stable. The dining room of the students hostel was enclosed with expanded metal to prevent theft. A thermosyphon heater was provided for the Benoid Gas Plant. A Glacia G—10 Ice Plant was installed during the year. With these exceptions, no other important alterations or additions were carried out at the Dépôt. A new operation room, operation table and water supply system have been sanctioned for the Dépôt, and funds have been provided for the building of a new rabbit house, all of which schemes are expected to be taken up during the financial year 1929-30.

*Output of Lymph.*—Three hundred and sixty-three cow-calves and fifteen buffalo-calves were successfully vaccinated during the year.



Fifteen cow-calves and four buffalo-calves either failed to take or yielded lymph of such poor quality that it had to be destroyed. The following Table compares the output and issue of lymph during the years of the triennium :—

Year.	Number of calves.	Total yield.		Average yield per calf.		Doses issued,
		Oz.	Gms.	Gms.	Grs.	
1926-27 ...	485 ...	411.43	11,664	24.05	370.36	974,229
1927-28 ...	378 calves ...	404.33	11,463	29.62	457.09	1,135,232
	10 buffalos	47.26	1,340	134.0	2069.88	
1928-29 ...	363 calves ...	464.80	13,177	36.30	516.18	1,376,338
	15 buffalos	62.65	1,776	118.40	1827.14	

From the above Table, it will be seen that the average yield per cow-calf increased from 29.62 grammes during 1927-28 to 36.30 grammes during 1928-29. On the other hand, there was a drop in the yield from buffalo-calves. The average yield in 1927-28 from a buffalo was 134.0 grammes, but only 118.40 grammes during the last year.

There were in stock 2,378 grammes on the 1st April 1928, while 14,953 grammes were obtained during the year, of which 976 grammes were used as seed lymph. Owing to a broken bottle, 210 grammes were lost in 1928. On the 1st April 1929 there was a balance of 2,988 grammes sufficient for  $2\frac{1}{2}$  months.

*Technique.*—Glycerinated lymph was used throughout the year and all lymph was subjected to bacteriological, animal, and Cunningham's potency tests before issue.

*Lymph Supply.*—Of the 1,376,338 doses issued, 1,332,014 were supplied to Municipalities and districts on payment and the balance 44,324 doses were supplied free of charge to Military (3,281), Jails (28,643) and Government vaccinators at Kanpetlet and Chin Hills (12,400). For a few months in the year, there was difficulty in supplying the full demands, due to shortage of capillary tubes and to disease in calves.

*Results.*—Out of 265,842 primary vaccinations, the results of which were reported, a success rate of 99.09 per cent. was obtained in 1928-29 as against 90.32 in 1927-28 and 95.74 in 1926-27. In 116,845 re-vaccinations, the percentage of success was 35.76 as against 31.9.

*Finance.*—The gross income of the Dépôt during the year 1928-29 excluding a sum of Rs. 6,893 due from Local Bodies at the close of the year was Rs. 37,322-11-6 of which Rs. 36,215-11-0 was realized from sale of lymph to Local Bodies and Rs. 1,107-0-6 from sale of vaccinated calves.

The total expenditure of the Dépôt for 1928-29 was Rs. 37,697-2-1 so that the net cost of the Dépôt to Government during the financial year was Rs. 374-6-7. A sum of Rs. 16,683-2-0 was expended on establishment, Rs. 5,954 on purchase of calves and Rs. 4,283-12-6 as feeding



charges. On the 13th October 1928, a system of hiring calves for vaccination was introduced which has been found satisfactory and economical. The cost of Europe medicines and instruments was Rs. 3,717-13-7 and Rs. 195 was spent on petty construction and repairs. On contingencies including postage and telegrams a sum of Rs. 6,863-6-0 was expended.

There were severe outbreaks of rinderpest and foot-and-mouth disease among the calves towards the end of 1928, which caused great anxiety and financial loss. The advice of the Veterinary Department was obtained and special precautions taken to prevent future outbreaks. A quarantine stable is urgently required, and plans and estimates have been submitted and sent up to Government for sanction.

19. *Training Class.*—Seventy-seven apprentice vaccinators including six ladies were trained during the year and all passed the qualifying examination. Twenty-one Public Health Inspectors and six Sub-Assistant Surgeons also underwent training.

20. *General Remarks.*—Dr. G. H. Blaker, I.M.D., was Director of the Dépôt with U Thaw Zan as Assistant Director throughout the year. Both these officers have carried out their work efficiently. I particularly desire to congratulate Dr. Blaker on his management of the Dépôt which is being rapidly modernized. He has introduced many improvements in technique, has placed the Dépôt on a sound financial basis, and has successfully met and overcome numerous difficulties. Major Bilderbeck and Dr. Anklesaria, Assistant Directors of Public Health, both visited the Dépôt during the year 1928-29.

G. JOLLY, C.I.E., M.B., D.P.H., D.T.M.,

*Lieut.-Colonel, I.M.S.,*

*Offg. Director of Public Health, Burma.*

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## A.—VACCINATION

STATEMENT NO. I—*Showing the particulars of Vaccination in the*

No.	Divisions and Districts.	Population of districts according to Census of 1921.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.		
					(6)		
(1)	(2)	(3)	(4)	(5)	Males.	Females.	Total.
ARAKAN DIVISION.							
1	Akyab District ...	576,430	142	13	35,927	28,323	64,250
	Rural ...	539,861	...	11	29,235	27,688	56,923
	Urban ...	36,569	...	2	6,692	635	7,327
2	Hill District of Arakan ...	20,914	14	3	1,175	894	2,069
3	Kyaukpyu District ...	199,873	46	6	5,779	5,262	11,041
	Rural ...	195,989	...	6	5,648	5,183	10,831
	Urban ...	3,884	...	...	131	79	210
4	Sandoway District ...	112,029	30	4	3,100	2,677	5,777
	Rural ...	108,267	...	3	3,039	2,628	5,667
	Urban ...	3,762	...	1	61	49	110
PEGU DIVISION.							
5	Rangoon ...	345,505	4,487	22	30,771	8,444	39,215
6	Pegu District ...	445,620	109	9	15,242	16,656	31,898
	Rural ...	419,355	...	7	13,304	14,761	28,065
	Urban ...	26,265	...	2	1,938	1,895	3,833
7	Tharrawaddy District ...	492,429	172	13	16,619	17,809	34,428
	Rural ...	449,000	...	8	15,090	16,284	31,374
	Urban ...	43,429	...	5	1,529	1,525	3,054
8	Hanthawaddy District ...	364,624	195	9	9,994	9,385	19,379
	Rural ...	340,935	...	7	6,892	8,909	15,801
	Urban ...	23,689	...	2	3,102	476	3,578
9	Insein District ...	289,540	152	9	8,710	7,578	16,288
	Rural ...	254,031	...	6	7,306	6,387	13,693
	Urban ...	35,509	...	3	1,404	1,191	2,595
10	Prome District ...	371,575	127	13	13,590	14,519	28,109
	Rural ...	322,246	...	9	11,822	12,968	24,790
	Urban ...	49,329	...	4	1,768	1,551	3,319
IRRAWADDY DIVISION.							
11	Bassein District ...	489,473	119	16	13,680	13,617	27,297
	Rural ...	434,904	...	12	11,387	11,910	23,297
	Urban ...	54,569	...	4	2,293	1,707	4,000

\* Secondary opera  
† Work done by

## DEPARTMENT.

Province of Burma during the year 1928-29 (Paragraphs 1, 2, 3, 4 and 5).

Average number of persons vaccinated by each vaccinator. (7)	Primary Vaccination.					No. (1)
	Total. (8)	Successful.			Unknown. (12)	
		Under one year. (9)	One and under six years. (10)	Total of all ages. (11)		
4,942	24,175	2,785	11,642	20,885	1,692	1
5,175	23,370	2,440	11,449	20,347	1,664	
3,664	805	345	193	538	28	
649	† 1,328	1	581	1,047	149	2
1,840	8,879	1,038	3,971	7,839	536	3
1,805	8,729	975	3,942	7,727	504	
...	150	63	29	112	32	
1,444	4,232	619	2,365	3,328	378	4
1,889	4,132	553	2,342	3,239	378	
110	100	66	23	89	...	
1,749	† 9,962	6,702	1,273	8,197	1,661	5
3,544	18,833	6,208	8,807	17,544	1,156	6
4,009	16,816	5,085	8,468	15,863	924	
1,917	2,017	1,123	339	1,681	232	
2,564	† 22,869	6,077	14,223	22,447	418	7
3,811	† 20,628	4,800	13,553	20,229	398	
569	† 2,241	1,277	670	2,218	20	
2,153	15,046	4,105	7,892	14,073	257	8
2,257	14,448	3,750	7,685	13,506	257	
1,789	598	355	207	567	...	
1,810	12,272	3,767	6,077	11,582	345	9
2,282	10,407	2,943	5,110	9,726	337	
865	1,865	824	967	1,856	8	
2,162	21,902	5,766	15,067	21,460	303	10
2,754	19,678	4,300	14,458	19,283	278	
830	2,224	1,466	609	2,177	25	
1,667	21,097	4,985	10,225	20,179	518	11
1,941	* 18,418	3,353	9,345	17,531	498	
844	2,679	1,632	880	2,648	20	

tions included.  
other agencies included.



## A.—VACCINATION

STATEMENT NO. I—*Showing the particulars of Vaccination in the*

No.	Divisions and Districts.			Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.
				Total.	Successful.	Unknown.	Primary.	Re-vaccination.	
(1)	(2)			(13)	(14)	(15)	(16)	(17)	(18)
ARAKAN DIVISION.									
1	Akyab District	...	...	40,075	14,461	5,991	92·89	42·43	61·32
	Rural	...	...	33,553	11,595	5,375	93·74	41·15	59·17
	Urban	...	...	6,522	2,866	616	69·24	48·53	93·08
2	Hill District of Arakan	...	...	741	280	155	88·80	47·78	63·45
3	Kyaukpyu District	...	...	2,162	752	375	93·96	42·08	42·98
	Rural	...	...	2,102	744	359	93·95	42·69	43·22
	Urban	...	...	60	8	16	94·92	18·18	30·90
4	Sandoway District	...	...	1,545	110	240	86·35	8·43	30·69
	Rural	...	...	1,535	108	240	86·28	8·34	30·91
	Urban	...	...	10	2	...	89·00	20·00	24·19
PEGU DIVISION.									
5	Rangoon	...	...	† 29,253	7,324	9,959	98·75	37·96	44·92
6	Pegu District	...	...	13,065	2,902	4,115	99·25	32·42	45·88
	Rural	...	...	11,249	1,868	3,617	99·82	24·48	42·28
	Urban	...	...	1,816	1,034	498	94·17	78·45	103·37
7	Tharrawaddy District	...	...	† 11,559	3,558	3,536	99·98	44·35	52·81
	Rural	...	...	† 10,746	3,217	3,283	100·00	43·10	52·22
	Urban	...	...	† 813	341	253	99·86	60·89	58·92
8	Hanthawaddy District	...	...	4,333	1,204	464	95·16	31·12	41·90
	Rural	...	...	1,353	303	48	95·17	23·22	40·50
	Urban	...	...	2,980	901	416	94·82	35·14	61·97
9	Insein District	...	...	4,016	570	2,333	97·11	33·87	41·97
	Rural	...	...	3,286	475	2,327	96·58	49·53	40·16
	Urban	...	...	730	95	6	99·95	13·12	54·94
10	Prome District	...	...	6,207	1,655	864	99·36	30·98	62·21
	Rural	...	...	5,112	1,444	639	99·40	32·28	64·32
	Urban	...	...	1,095	211	225	99·00	24·25	48·41
IRRAWADDY DIVISION.									
11	Bassein District	...	...	6,386	2,396	1,895	98·06	53·35	46·12
	Rural	...	...	5,065	1,821	1,237	97·83	47·57	44·50
	Urban	...	...	† 1,321	575	658	99·59	86·73	59·06

† Work done by



## DEPARTMENT.

*Province of Burma during the year 1928-29—contd.*

Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.		No.
Primary.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	
(19)	(20)	(21)	(22)	(23)	(24)	(1)
7.00	14.95	22,981	39.87	93	0.16	1
7.12	16.02	...	...	...	...	
3.48	9.44	...	...	...	...	
11.22	0.92	1,276	61.02	...	...	2
6.04	17.35	9,429	47.17	7	0.03	3
5.77	17.08	...	...	...	...	
21.33	26.67	...	...	...	...	
8.93	15.53	4,859	43.38	16	0.14	4
9.15	15.64	...	...	...	...	
...	...	...	...	...	...	
16.67	34.04	25,311	73.41	267	0.78	5
6.14	31.50	16,410	36.83	161	0.36	6
5.49	32.15	...	...	...	...	
11.50	27.42	...	...	...	...	
1.83	30.59	22,277	45.24	21	0.04	7
1.93	30.55	...	...	...	...	
0.89	31.12	...	...	...	...	
1.71	10.71	17,456	47.87	53	0.15	8
1.78	3.55	...	...	...	...	
...	13.96	...	...	...	...	
2.81	58.09	12,587	43.36	44	0.15	9
3.24	70.82	...	...	...	...	
0.43	0.82	...	...	...	...	
1.38	13.92	19,171	51.59	101	0.27	10
1.41	12.50	...	...	...	...	
1.12	20.55	...	...	...	...	
2.46	29.67	21,298	43.51	31	0.06	11
2.70	24.42	...	...	...	...	
0.75	49.81	...	...	...	...	

other agencies included.

## A.—VACCINATION

STATEMENT NO. I—*Showing the particulars of Vaccination in the*

No.	Divisions and Districts.	Population of districts according to Census of 1921.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.		
					(6)		
(1)	(2)	(3)	(4)	(5)	Males.	Females.	Total.
	IRRAWADDY DIVISION— <i>concl'd.</i>						
12	Henzada District ...	550,920	192	14	15,825	17,245	33,070
	Rural ...	512,412	...	11	14,829	16,235	31,064
	Urban ...	38,508	...	3	996	1,010	2,006
13	Myaungmya District ...	370,551	140	15	15,547	17,384	32,931
	Rural ...	349,709	...	12	14,594	16,557	31,151
	Urban ...	20,842	...	3	953	827	1,780
14	Ma-ubin District... ..	330,106	201	12	14,611	14,619	29,230
	Rural ...	305,938	...	9	13,295	13,942	27,237
	Urban ...	24,168	...	3	1,316	677	1,993
15	Pyapôn District ...	288,994	135	10	11,657	13,005	24,662
	Rural ...	271,661	...	8	10,728	12,134	22,862
	Urban ...	17,333	...	2	929	871	1,800
	TENASSERIM DIVISION.						
16	Salween District ...	50,379	19	4	4,852	3,328	8,180
17	Thatôn District ...	471,100	98	11	15,672	15,918	31,590
	Rural ...	448,841	...	10	15,119	15,561	30,680
	Urban ...	22,259	...	1	553	357	910
18	Amherst District... ..	417,910	59	11	20,154	25,378	51,532
	Rural ...	350,022	...	8	23,554	23,655	47,209
	Urban ...	67,888	...	3	2,600	1,723	4,323
19	Tavoy District ...	156,786	30	6	4,058	4,324	8,382
	Rural ...	129,306	...	4	3,495	3,789	7,284
	Urban ...	27,480	...	2	563	535	1,098
20	Mergui District ...	135,465	14	5	4,451	4,232	8,683
	Rural ...	117,057	...	4	3,213	3,310	6,523
	Urban ...	18,408	...	1	1,238	922	2,160
21	Toungoo District ...	381,883	62	13	15,884	15,055	30,939
	Rural ...	350,117	...	10	14,659	14,077	28,736
	Urban ...	31,766	...	3	1,225	978	2,203
	MAGWE DIVISION.						
22	Thayetmyo District ...	255,406	54	8	6,419	6,580	12,999
	Rural ...	233,419	...	6	5,219	5,726	10,945
	Urban ...	21,987	...	2	1,200	854	2,054
23	Minbu District ...	274,302	83	7	6,272	6,379	12,651
	Rural ...	262,065	...	5	6,085	6,213	12,298
	Urban ...	12,237	...	2	187	166	353

\* Secondary  
† Work done by



## DEPARTMENT.

Province of Burma during the year 1928-29—contd.

Average number of persons vaccinated by each vaccinator. (7)	Primary Vaccination.					No. (1)
	Total. (8)	Successful.			Unknown. (12)	
		Under one year. (9)	One and under six years. (10)	Total of all ages. (11)		
2,362	29,062	8,197	17,050	28,204	719	12
2,824	27,818	7,366	16,674	26,980	702	
669	1,244	831	376	1,224	17	13
2,161	†24,733	4,650	13,093	23,737	996	
2,560	†23,678	4,302	12,570	22,708	970	
563	† 1,055	348	523	1,029	26	
2,430	†21,074	4,413	13,934	20,817	231	14
3,026	20,000	3,762	13,597	19,771	210	
642	† 1,074	651	337	1,046	21	15
2,466	*19,209	5,601	12,911	18,847	178	
2,858	*17,880	5,037	12,363	17,553	159	
900	* 1,329	564	548	1,294	19	
2,045	*3,996	147	613	2,609	1,216	16
2,872	20,616	4,979	10,749	18,650	1,580	17
3,068	20,017	4,532	10,622	18,067	1,571	18
910	599	447	127	583	9	
4,671	†22,434	5,080	9,928	21,624	606	
5,884	†20,543	3,336	9,856	19,808	596	
1,437	*†1,891	1,744	72	1,816	10	19
1,397	7,736	4,275	3,103	7,482	28	
1,821	*6,794	3,433	3,042	6,571	28	
549	942	842	61	911	...	
1,737	*7,014	1,227	2,781	5,348	778	20
1,631	*5,990	777	2,440	4,470	724	
2,160	*1,024	450	341	878	54	21
2,343	17,808	2,392	8,290	16,918	741	
2,826	†16,602	2,021	7,743	15,778	710	
734	*1,206	371	547	1,140	31	
1,625	10,101	1,182	4,337	9,334	405	22
1,824	8,530	818	3,508	7,978	335	
1,027	1,571	364	829	1,356	70	23
1,807	12,841	4,883	7,368	12,294	183	
2,460	*12,497	4,628	7,290	11,956	183	
177	344	255	78	338	...	

operations included.  
other agencies included.

## A.—VACCINATION

## STATEMENT NO. I—Showing the particulars of Vaccination in the

No.	Divisions and Districts.	Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.
		Total.	Successful.	Unknown.	Primary.	Re-vaccination.	
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)
IRRAWADDY DIVISION—concl'd.							
12	Henzada District ...	4,008	683	664	99·51	20·42	52·43
	Rural ...	3,246	620	644	99·50	23·83	53·86
	Urban ...	762	63	20	99·76	8·49	33·42
13	Myaungmya District ...	8,198	2,432	1,712	100·00	37·50	70·62
	Rural ...	7,473	2,204	1,541	100·00	37·15	71·24
	Urban ...	725	228	171	100·00	41·16	60·31
14	Ma-ubin District ...	8,156	1,110	371	99·88	14·26	66·42
	Rural ...	7,237	961	221	99·90	13·70	67·77
	Urban ...	† 919	149	150	99·34	19·38	49·45
15	Pyapôn District ...	5,486	1,043	425	99·03	20·61	68·82
	Rural ...	5,006	987	376	99·05	21·32	68·25
	Urban ...	480	56	49	98·78	12·99	77·89
TENASSERIM DIVISION.							
16	Salween District ...	*4,251	871	1,417	93·85	30·73	69·08
17	Thatôn District ...	10,974	2,620	2,051	97·97	29·36	45·15
	Rural ...	10,663	2,518	1,934	97·95	28·85	45·86
	Urban ...	311	102	117	98·81	52·58	30·77
18	Amherst District ...	29,119	4,529	3,539	99·07	17·71	62·58
	Rural ...	†26,666	3,421	3,109	99·30	14·52	66·36
	Urban ...	2,453	1,108	430	96·54	54·77	43·07
19	Tavoy District ...	853	354	102	97·07	47·14	49·98
	Rural ...	697	289	98	97·12	48·25	53·05
	Urban ...	156	65	4	96·71	42·76	35·52
20	Mergui District ...	2,179	816	158	85·76	40·38	45·50
	Rural ...	1,027	287	66	84·88	29·86	40·64
	Urban ...	1,152	529	92	90·52	49·91	76·43
21	Toungoo District ...	13,135	2,857	2,143	99·13	25·99	51·78
	Rural ...	†12,134	2,415	2,097	99·28	24·06	51·96
	Urban ...	1,001	442	46	97·02	46·28	49·80
MAGWE DIVISION.							
22	Thayetmyo District ...	2,898	1,452	173	96·27	53·28	42·23
	Rural ...	2,415	1,305	114	97·35	56·71	39·77
	Urban ...	483	147	59	90·34	34·67	68·36
23	Minbu District ...	55	17	6	97·12	34·69	44·88
	Rural ...	46	14	...	97·09	30·43	45·68
	Urban ...	9	3	6	98·26	100·00	27·87

\* Secondary  
† Work done by



## DEPARTMENT.

*Province of Burma during the year 1928-29—contd.*

Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.		No.
Primary.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	
(19)	(20)	(21)	(22)	(23)	(24)	(1)
2.47	16.57	27,453	49.83	33	0.06	12
2.52	19.84	...	...	...	...	
1.37	2.62	...	...	...	...	
4.03	20.88	24,814	66.97	42	0.11	13
4.10	20.62	...	...	...	...	
2.46	23.59	...	...	...	...	
1.10	4.55	21,395	64.81	65	0.20	14
1.05	3.05	...	...	...	...	
1.96	16.32	...	...	...	...	
0.93	7.75	18,867	65.28	66	0.23	15
0.89	7.51	...	...	...	...	
1.43	10.21	...	...	...	...	
30.43	33.33	3,937	78.15	...	...	16
7.66	18.69	19,160	40.67	73	0.16	17
7.85	18.14	...	...	...	...	
1.50	37.62	...	...	...	...	
2.70	12.15	20,071	48.03	40	0.10	18
2.90	11.66	...	...	...	...	
0.53	17.53	...	...	...	...	
0.36	11.96	7,175	45.76	2	0.01	19
0.41	14.06	...	...	...	...	
...	2.56	...	...	...	...	
11.09	7.25	5,157	38.07	12	0.09	20
12.09	6.43	...	...	...	...	
5.27	7.99	...	...	...	...	
4.16	16.32	15,103	39.55	56	0.15	21
4.28	17.28	...	...	...	...	
2.57	4.60	...	...	...	...	
4.01	5.97	10,764	42.14	78	0.30	22
3.93	4.72	...	...	...	...	
4.46	12.22	...	...	...	...	
1.43	10.91	11,875	43.29	145	0.53	23
1.46	...	...	...	...	...	
...	66.67	...	...	...	...	

operations included.  
other agencies included.

## A.—VACCINATION

## STATEMENT NO. I—Showing the particulars of Vaccination in the

No.	Divisions and Districts.	Population of districts according to Census of 1921.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.		
					(6)		
(1)	(2)	(3)	(4)	(5)	Males.	Females.	Total.
	MAGWE DIVISION—concl'd.						
24	Magwe District ...	423,252	115	10	14,826	12,876	27,702
	Rural ...	393,995	...	6	14,030	12,259	26,289
	Urban ...	29,257	...	4	796	617	1,413
25	Pakôkku District ...	465,771	75	9	10,726	11,041	21,767
	Rural ...	446,264	...	8	10,091	10,740	20,831
	Urban ...	19,507	...	1	635	301	936
26	Chin Hills District ...	110,079	14	5	5,972	4,949	10,921
27	Pakôkku Hill Tracts ...	20,043	6	1	602	233	835
	MANDALAY DIVISION.						
28	Mandalay District ...	356,621	166	11	17,680	16,458	34,138
	Rural ...	187,707	...	5	3,274	3,719	6,993
	Urban ...	168,914	...	6	14,406	12,739	27,145
29	Kyauksè District ...	142,677	111	5	3,275	3,819	7,094
	Rural ...	136,570	...	4	3,123	3,636	6,759
	Urban ...	6,107	...	1	152	183	335
30	Meiktila District ...	289,897	127	6	8,547	8,624	17,171
	Rural ...	281,029	...	5	6,920	7,389	14,309
	Urban ...	8,868	...	1	1,627	1,235	2,862
31	Myingyan District ...	442,008	161	9	10,477	10,020	20,497
	Rural ...	415,983	...	7	9,647	9,396	19,043
	Urban ...	26,025	...	2	830	624	1,454
32	Yamèthin District ...	323,189	77	7	20,794	23,357	44,151
	Rural ...	294,730	...	5	18,919	21,476	40,395
	Urban ...	28,459	...	2	1,875	1,881	3,756
	SAGAING DIVISION.						
33	Bhamo District ...	112,960	16	4	2,029	1,960	3,989
	Rural ...	105,219	...	3	1,864	1,791	3,655
	Urban ...	7,741	...	1	165	169	334
34	Myitkyina District ...	146,074	13	3	3,681	2,628	6,309
	Rural ...	141,118	...	3	3,433	2,510	5,943
	Urban ...	4,956	...	...	248	118	366
35	Shwebo District ...	380,016	68	12	13,421	15,362	28,783
	Rural ...	366,669	...	11	13,004	15,062	28,066
	Urban ...	13,347	...	1	417	300	717

\* Secondary  
† Work done by



## DEPARTMENT.

*Province of Burma during the year 1928-29—contd.*

Average number of persons vaccinated by each vaccinator. (7)	Primary Vaccination,					No. (1)
	Total. (8)	Successful.			Unknown. (12)	
		Under one year. (9)	One and under six years. (10)	Total of all ages. (11)		
2,769	†15,490	6,327	6,126	14,815	454	24
4,382	*14,584	5,810	5,837	13,980	410	
349	†906	517	289	835	44	
2,419	15,312	5,264	7,611	13,687	482	25
2,604	*14,760	4,982	7,513	13,185	454	
936	552	282	98	502	28	
2,184	*9,240	78	4,807	7,515	158	26
835	481	18	172	389	55	27
3,101	†17,083	10,104	5,072	15,916	601	28
1,399	*6,421	1,770	3,321	5,429	599	
4,520	*†10,662	8,334	1,751	10,487	2	
1,409	5,660	2,748	2,614	5,434	194	29
1,678	*5,329	2,486	2,567	5,106	191	
335	331	262	47	328	3	
2,861	11,224	2,031	6,438	8,989	1,500	30
2,862	10,726	1,747	6,265	8,499	1,494	
2,858	†498	284	173	490	6	
2,277	13,784	6,488	4,429	12,066	1,441	31
2,720	12,989	6,032	4,306	11,457	1,305	
727	795	456	123	609	136	
6,307	19,742	5,962	7,771	17,517	1,604	32
8,079	18,054	5,277	7,149	16,016	1,466	
1,878	1,688	685	622	1,501	138	
808	3,239	267	1,528	2,222	870	33
966	†3,025	180	1,414	2,021	870	
334	214	87	114	201	...	
979	5,440	190	1,076	1,835	3,487	34
857	†5,239	163	1,002	1,667	3,476	
...	201	27	74	168	11	
2,399	18,331	3,786	10,809	15,788	1,753	35
2,551	17,862	3,486	10,690	15,351	1,733	
717	469	300	119	437	20	

operations included.  
other agencies included.

## A.—VACCINATION

## STATEMENT NO. I—Showing particulars of Vaccination in the

No.	Divisions and Districts.	Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.
		Total.	Successful.	Unknown.	Primary.	Re-vaccination.	
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)
MAGWE DIVISION—concl'd.							
24	Magwe District ...	12,220	2,908	2,597	98.53	30.22	41.87
	Rural ...	11,713	2,669	2,512	98.63	29.01	42.26
	Urban ...	507	239	85	96.87	56.64	36.71
25	Pakôkku District ...	6,514	870	391	92.29	14.21	31.25
	Rural ...	6,130	827	351	92.16	14.31	31.40
	Urban ...	384	43	40	95.80	12.50	27.94
26	Chin Hills District ...	1,839	783	137	82.75	46.00	75.38
27	Pakôkku Hill Tracts ...	354	57	116	91.31	23.95	22.25
MANDALAY DIVISION.							
28	Mandalay District ...	17,304	6,506	101	96.57	37.82	62.87
	Rural ...	652	298	100	93.25	53.99	30.51
	Urban ...	†16,652	6,208	1	98.38	37.28	98.84
29	Kyaukse District ...	1,450	584	265	99.41	49.28	42.18
	Rural ...	*†1,446	584	263	99.38	49.37	41.66
	Urban ...	4	.	2	100.00	...	53.71
30	Meiktila District ...	5,947	2,262	915	92.44	44.95	38.81
	Rural ...	3,583	1,592	791	92.06	57.02	35.91
	Urban ...	†2,364	670	124	99.59	29.91	130.81
31	Myingyan District ...	6,811	1,035	1,768	97.76	20.52	29.64
	Rural ...	*6,152	962	1,516	98.06	20.75	29.85
	Urban ...	659	73	252	92.41	17.94	26.21
32	Yamethin District ...	24,409	7,107	4,661	96.58	35.99	76.19
	Rural ...	22,341	6,483	3,887	96.55	35.13	76.34
	Urban ...	2,068	624	774	96.84	48.22	74.67
SAGAING DIVISION.							
33	Bhamo District ...	750	222	129	93.79	35.75	21.64
	Rural ...	†630	153	129	93.78	30.54	20.66
	Urban ...	120	69	...	93.93	57.50	34.88
34	Myitkyina District ...	869	427	239	93.96	67.78	15.49
	Rural ...	†704	288	221	94.55	59.63	13.85
	Urban ...	165	139	18	88.42	94.56	61.95
35	Shwebo District ...	10,452	5,327	1,732	95.23	61.09	55.56
	Rural ...	10,204	5,177	1,711	95.18	60.96	55.99
	Urban ...	248	150	21	97.33	66.08	43.98

\* Secondary  
† Dispensary Vaccination and work



## DEPARTMENT.

*Province of Burma during the year 1928-29—contd.*

Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.		No.
Primary.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	
(19)	(20)	(21)	(22)	(23)	(24)	(1)
2.93	21.25	18,080	42.72	211	0.50	24
2.81	21.45	...	...	...	...	
4.86	16.77	...	...	...	...	
3.15	6.00	14,202	30.49	122	0.26	25
3.08	5.73	...	...	...	...	
5.07	10.42	...	...	...	...	
1.71	7.45	3,197	29.04	...	...	26
11.43	32.77	739	36.89	...	...	27
3.52	0.58	18,691	52.41	162	0.45	28
9.33	15.34	...	...	...	...	
0.02	0.01	...	...	...	...	
3.43	18.28	7,076	49.59	21	0.15	29
3.58	18.19	...	...	...	...	
0.91	50.00	...	...	...	...	
13.36	15.39	8,481	29.26	74	0.26	30
13.93	22.08	...	...	...	...	
1.20	5.25	...	...	...	...	
10.45	25.96	15,915	36.01	344	0.78	31
10.05	24.64	...	...	...	...	
17.11	38.24	...	...	...	...	
8.12	19.10	13,830	42.79	50	0.16	32
8.12	17.40	...	...	...	...	
8.18	37.43	...	...	...	...	
26.86	17.20	4,906	43.43	...	...	33
28.76	20.48	...	...	...	...	
...	...	...	...	...	...	
64.10	27.50	3,205	21.94	...	...	34
66.35	31.39	...	...	...	...	
5.47	10.91	...	...	...	...	
9.56	16.57	16,784	42.89	63	0.16	35
9.70	16.77	...	...	...	...	
4.26	8.47	...	...	...	...	

operations included.  
done by other agencies included.

## A.—VACCINATION

STATEMENT NO. I—*Showing particulars of Vaccination in the*

No.	Divisions and Districts.	Population of districts according to Census of 1921.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.		
(1)	(2)	(3)	(4)	(5)	(6)		
	SAGAING DIVISION— <i>concl'd.</i>						
36	Sagaing District ...	326,908	180	8	11,961	15,455	27,416
	Rural ...	315,050	...	6	10,996	14,489	25,485
	Urban ...	11,858	...	2	965	966	1,931
37	Katha District ...	233,706	30	6	7,177	7,298	14,475
38	Upper Chindwin District ...	179,245	11	6	3,920	3,675	7,595
39	Lower Chindwin District ...	354,148	99	8	11,073	12,138	23,211
	Rural ...	344,923	...	7	9,733	11,368	21,101
	Urban ...	9,225	...	1	1,340	770	2,110
	FEDERATED SHAN STATES.						
40	Northern Shan States ...	559,223	28	20	21,582	20,141	41,723
	Rural ...	555,775	...	20	21,286	20,009	41,295
	Urban ...	3,448	...	...	296	132	428
41	Southern Shan States ...	911,468	23	22	23,843	20,541	44,384
	Rural ...	905,452	...	21	23,640	20,339	43,979
	Urban ...	6,016	...	1	203	202	405
	Total for 1928-29 ...	13,169,099	56	385	487,575	459,186	946,761
	Rural ...	11,895,815	...	292	402,171	412,477	814,648
	Urban ...	1,273,284	...	93	85,404	46,709	132,113
	Total for 1927-28 ...	13,169,099	56	384	468,978	399,536	868,514
	Rural ...	11,912,411	...	293	344,506	350,772	695,278
	Urban ...	1,256,688	...	91	124,472	48,764	173,236
	Total for 1926-27 ...	13,169,099	56	377	376,161	342,918	719,079
	Rural ...	11,912,411	...	289	310,246	310,227	620,473
	Urban ...	1,256,688	...	88	65,915	32,691	98,606

\* Secondary

† Dispensary Vaccination and work



## DEPARTMENT.

*Province of Burma during the year 1928-29—contd.*

Average number of persons vaccinated by each vaccinator. (7)	Primary Vaccination.					No. (1)
	Total. (8)	Successful.			Unknown. (12)	
		Under one year. (9)	One and under six years. (10)	Total of all ages. (11)		
3,427	17,137	7,403	8,792	16,320	527	36
4,248	15,969	6,991	8,107	15,189	509	
966	1,168	412	685	1,131	18	
2,413	12,992	2,417	7,162	12,571	227	37
1,266	6,004	866	2,780	5,555	96	38
2,901	13,859	6,901	5,489	13,132	33	39
3,014	*13,582	6,688	5,445	12,869	21	
2,110	277	213	44	263	12	
2,029	36,005	4,785	19,782	35,152	461	40
2,008	†35,845	4,751	19,722	35,027	461	
...	160	34	60	125	...	
1,965	37,277	994	11,658	23,541	13,028	41
2,039	†36,954	900	11,454	23,219	13,028	
405	323	94	204	322	...	
2,432	615,519	155,708	300,396	556,889	42,045	
2,761	562,355	123,001	286,964	507,792	39,344	
1,401	53,164	32,707	13,432	49,097	2,701	
2,253	550,154	140,728	252,996	482,304	26,807	
2,373	500,743	111,351	240,811	438,471	24,324	
1,866	49,411	29,377	12,185	43,833	2,483	
1,906	511,750	142,552	244,546	472,368	22,924	
2,146	464,728	113,595	233,125	429,543	21,124	
1,115	47,022	28,957	11,421	42,825	1,800	

operations included.  
done by other agencies included,

## A.—VACCINATION

STATEMENT NO. I—*Showing particulars of Vaccination in the*

No.	Divisions and Districts.	Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.
		Total.	Successful.	Unknown.	Primary.	Re-vaccination.	
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)
	SAGAING DIVISION— <i>concl'd.</i>						
36	Sagaing District ...	10,279	3,780	2,340	98·25	47·61	61·49
	Rural ...	9,516	3,318	2,278	98·25	45·84	58·74
	Urban ...	763	462	62	98·35	65·91	134·34
37	Katha District ...	1,483	346	155	98·48	26·05	55·27
38	Upper Chindwin District ...	1,591	769	27	94·03	49·17	35·28
39	Lower Chindwin District ...	9,452	6,055	441	94·98	67·20	54·18
	Rural ...	7,619	5,245	212	94·90	70·81	52·52
	Urban ...	1,833	810	229	99·25	50·50	116·31
	FEDERATED SHAN STATES.						
40	Northern Shan States ...	5,718	4,169	175	98·90	75·21	70·31
	Rural ...	†5,450	4,119	169	98·99	78·00	70·43
	Urban ...	268	50	6	78·13	19·08	50·75
41	Southern Shan States ...	7,107	1,915	633	97·08	29·58	27·93
	Rural ...	7,025	1,900	632	97·05	29·72	27·74
	Urban ...	82	15	1	99·69	18·52	56·02
	Total for 1928-29 ...	333,203	99,118	59,510	97·11	36·22	49·81
	Rural ...	254,035	73,317	44,104	97·09	34·92	48·85
	Urban ...	79,168	25,801	15,406	97·29	40·46	58·82
	Total for 1927-28 ...	320,248	102,917	62,187	92·16	39·88	44·44
	Rural ...	195,723	58,840	29,093	92·03	35·31	41·66
	Urban ...	124,525	44,077	33,094	93·40	48·21	69·95
	Total for 1926-27 ...	208,801	61,531	37,711	96·63	35·97	40·54
	Rural ...	156,482	44,422	25,870	96·83	34·01	39·79
	Urban ...	52,319	17,109	11,841	94·70	42·27	47·69



## DEPARTMENT.

*Province of Burma during the year 1928-29—concl'd.*

Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.		No.
Primary.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	
(19)	(20)	(21)	(22)	(23)	(24)	(1)
3.08	22.76	20,528	62.80	126	.39	36
3.19	23.94	...	...	...	...	
1.54	8.13	...	...	...	...	
1.75	10.45	10,918	46.72	...	...	37
1.60	1.70	10,858	60.57	...	...	38
0.24	4.67	15,485	45.16	71	.21	39
0.15	2.78	...	...	...	...	
4.33	12.49	...	...	...	...	
1.28	3.06	22,478	40.19	...	...	40
1.29	3.10	...	...	...	...	
...	2.24	...	...	...	...	
34.95	8.91	29,378	32.23	...	...	41
35.25	9.00	...	...	...	...	
...	1.22	...	...	...	...	
6.83	17.86	593,576	45.07	2,648	0.24	
7.00	17.36	...	...	...	...	
5.08	19.46	...	...	...	...	
4.87	19.42	585,441	44.46	2,595	0.24	
4.86	14.86	...	...	...	...	
5.03	26.58	...	...	...	...	
4.48	18.06	585,415	44.45	2,325	0.22	
4.55	16.53	...	...	...	...	
3.83	22.63	...	...	...	...	

SUM

(1)	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which results were known.	
	Primary. (2)	Re-vacci- nation. (3)	Primary. (4)	Re-vacci- nation. (5)	Primary. (6)	Re-vacci- nation. (7)
Vaccination by Special Staff ...	606,219	330,221	608,042	330,359	97.10	36.21
Dispensary Vaccination ...	7,105	2,339	7,105	2,339	99.45	43.31
Vaccination by other agencies ...	372	505	372	505	97.53	26.75
Total ...	613,696	333,065	615,519	333,203	97.11	36.22
Total for 1927-28 ...	554,649	323,095	556,522	323,110	92.16	40.01
Total for 1926-27 ...	513,912	210,317	515,359	210,377	96.54	36.00



**MARY** (Paragraphs 9 and 11).

Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccination per 1,000 population.	Total cost of Department.	Average cost of each successful case.
Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One year and under six years.			
(8)	(9)	(10)	(11)	(12)	(13)	(14)
					Rs. A. P.	Rs. A. P.
385	2,432	155,057	298,621	49·56	4,29,062 6 0	0 9 7
...	...	459	1,653	22	...	...
...	...	192	122	04	...	...
385	2,432	155,708	300,396	49·81	...	...
384	2,253	141,157	254,139	44·68	...	...
377	1,906	142,762	245,494	40·71	...	...

## A.—VACCINATION

## STATEMENT NO. II—Showing the cost of the Department in the

No.	Divisions and Districts.	District Health Officers.	Ex		
			Pay.	Inspector of Vaccination.	Pay.
(1)	(2)	(3)	(4)	(5)	(6)
			Rs. A. P.		Rs. A. P.
ARAKAN DIVISION.					
1	Akyab ...	...	...	1	990 0 0
2	Hill District of Arakan ...	...	...	...	...
3	Kyaukpyu ...	...	...	1	951 1 0
4	Sandoway ...	...	...	1	984 0 0
PEGU DIVISION.					
5	Rangoon ...	...	...	1	...
6	Pegu ...	...	...	2	2,220 0 0
7	Tharrawaddy ...	...	...	6	1,667 6 7
8	Hanthawaddy ...	...	...	5	3,797 8 0
9	Insein ...	...	...	4	3,753 15 0
10	Prome ...	...	...	2	...
IRRAWADDY DIVISION.					
11	Bassein ...	...	...	5	1,766 10 0
12	Henzada ...	...	...	4	1,979 15 0
13	Myaungmya ...	...	...	5	2,535 3 0
14	Ma-ubin ...	...	...	4	2,425 1 0
15	Pyapôn ...	...	...	4	2,568 10 0
TENASSERIM DIVISION.					
16	Salween ...	...	...	1	1,041 0 0
17	Thatôn ...	...	...	2	2,298 14 0
18	Amherst ...	...	...	4	3,371 12 0
19	Tavoy ...	...	...	1	1,434 12 0
20	Mergui ...	...	...	1	1,260 0 0
21	Toungoo ...	...	...	4	2,517 10 3
MAGWE DIVISION.					
22	Thayetmyo ...	...	...	2	900 0 0
23	Minbu ...	...	...	2	1,830 0 0
24	Magwe ...	...	...	4	1,631 2 0
25	Pakôkku ...	...	...	1	1,480 5 0
26	Chin Hills ...	...	...	1	1,176 0 0
27	Pakkôku Hill Tracts ...	...	...	...	...



## DEPARTMENT.

Province of Burma during the year 1928-29 (Paragraphs 14 and 15).

penditure.

Vacci- nators.	Pay.	Clerks.	Pay.	Peons, etc.	Pay.	Total Pay of Establish- ment.	Travelling Allowance.	No.
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(1)
	Rs. A. P.		Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.	
13	5,962 11 0	...	...	...	...	6,952 11 0	3,359 6 0	1
3	1,252 10 0	...	...	...	...	1,252 10 0	436 4 0	2
6	2,789 7 0	...	...	...	...	3,740 8 0	2,123 15 0	3
4	1,481 9 0	...	...	...	...	2,465 9 0	802 15 0	4
22(a)	5,981 6 0	...	...	2	486 0 0	6,467 6 0	293 5 0	5
9	5,246 11 0	...	...	...	...	7,466 11 0	5,090 3 0	6
13	5,367 2 7	...	...	1	180 0 0	7,214 9 2	3,341 5 0	7
9	5,496 6 10	...	...	...	...	9,293 14 10	6,936 11 0	8
9	4,731 5 6	...	...	...	...	8,485 4 6	4,536 8 3	9
13	6,334 5 0	...	...	...	...	6,334 5 0	2,864 5 0	10
16	6,642 6 0	...	...	...	...	8,409 0 0	3,759 1 9	11
14	7,423 9 0	...	...	...	...	9,403 8 0	4,214 6 0	12
15	6,165 10 0	...	...	...	...	8,700 13 0	4,828 10 0	13
12	5,461 11 0	...	...	...	...	7,886 12 0	3,185 3 0	14
10	4,350 5 0	...	...	1	16 0 0	6,934 15 0	4,302 4 0	15
4	1,611 13 0	...	...	...	...	2,652 13 0	1,440 3 0	16
11	6,305 5 0	...	...	...	...	8,604 3 0	4,527 0 0	17
11	5,818 15 0	...	...	...	...	9,190 11 0	3,901 15 6	18
6	2,672 15 0	...	...	...	...	4,107 11 0	3,228 6 0	19
5	2,678 4 0	...	...	...	...	3,938 4 0	1,861 4 0	20
13	5,621 14 0	...	...	...	...	8,139 8 3	3,758 11 0	21
8	2,995 6 0	...	...	...	...	3,895 6 0	1,918 2 0	22
7	2,961 15 0	...	...	...	...	4,791 15 0	2,294 8 0	23
10	4,866 2 0	...	...	...	...	6,497 4 0	2,723 10 0	24
9	4,208 5 0	...	...	1	135 7 0	5,824 1 0	4,092 8 0	25
5	2,698 0 0	...	...	...	...	3,874 0 0	2,182 0 0	26
1	524 13 0	...	...	1	270 0 0	794 13 0	355 0 0	27

## A.—VACCINATION

STATEMENT NO. II—*Showing the cost of the Department*

No.	Divisions and Districts.	District Health Officers.	Pay.			Inspector of Vaccination.	Pay.			Ex
			(4)				(6)			
(1)	(2)	(3)	(4)			(5)	(6)			
			Rs.	A.	P.		Rs.	A.	P.	
MANDALAY DIVISION.										
28	Mandalay ... ..	...	...			1	1,295	0	0	
29	Kyauksè ... ..	...	...			1	990	0	0	
30	Meiktila ... ..	...	...			1	...			
31	Myingyan ... ..	...	...			3	1,080	0	0	
32	Yamèthin ... ..	...	...			2	1,250	0	0	
SAGAING DIVISION.										
33	Bhamo ... ..	...	...			...	...			
34	Myitkyina ... ..	...	...			...	...			
35	Shwebo ... ..	...	...			4	685	11	0	
36	Sagaing ... ..	...	...			1	990	0	0	
37	Katha ... ..	...	...			2	2,904	13	0	
38	Upper Chindwin ... ..	...	...			1	1,983	11	0	
39	Lower Chindwin ... ..	...	...			1	1,440	0	0	
FEDERATED SHAN STATES.										
40	Northern Shan States ... ..	...	...			...	...			
41	Southern Shan States ... ..	...	...			4	3,390	0	0	
OTHERS.										
42	Meiktila Vaccine Depôt ... ..	2	11,411	13	0	...	...			
43	Office of Director of Public Health, Burma. ... ..	...	...			...	...			
TOTAL ... ..			2	11,411	13 0	(b) 89	60,589	15	10	
Total for 1927-28 ... ..			2	10,974	1 0	85	56,949	12	9	
Total for 1926-27 ... ..			2	3,780	0 0	80	57,226	8	5	



## DEPARTMENT.

in the Province of Burma during the year 1928-29—contd.

penditure.

Vacci- nators.	Pay.	Clerks.	Pay.	Peons, etc.	Pay.	Total Pay of Establish- ment.	Travelling Allowance.	No.
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(1)
	Rs. A. P.		Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.	
11	8,274 2 0	...	...	...	...	9,569 2 0	1,672 9 0	28
5	1,854 2 0	...	...	...	...	2,844 2 0	1,142 4 0	29
6	2,767 0 0	...	...	...	...	2,767 0 0	1,086 4 0	30
9	3,692 4 0	...	...	...	...	4,772 4 0	1,680 11 0	31
7	3,668 6 0	...	...	...	...	4,918 6 0	2,078 8 0	32
4	1,520 2 0	...	...	...	...	1,520 2 0	477 10 0	33
3	1,572 14 0	...	...	...	...	1,572 14 0	517 3 0	34
12	5,740 6 0	...	...	...	...	6,426 1 0	2,827 6 0	35
8	3,466 4 0	...	...	...	...	4,456 4 0	1,975 3 0	36
6	2,898 3 0	...	...	...	...	5,803 0 0	1,912 6 0	37
6	3,704 1 0	...	...	...	...	5,687 12 0	1,954 3 0	38
8	3,883 4 0	...	...	1	180 0 0	5,503 4 0	2,508 14 0	39
20	8,416 1 0	...	...	1	240 0 0	8,656 1 0	4,493 7 0	40
22	9,238 3 0	...	...	7	2,121 2 0	14,749 5 0	6,572 5 0	41
...	...	2	1,509 6 0	13	3,655 11 0	16,576 14 0	106 4 0	42
...	...	...	...	...	...	...	...	43
385	1,78,346 1 11	2	1,509 6 0	28	7,284 4 0	2,59,141 8 9	1,13,362 10 6	
384	1,73,182 7 10	3	2,476 14 0	24	5,937 3 0	2,49,520 6 7	1,16,627 5 0	
377	1,67,762 5 11	3	2,576 13 0	23	5,601 6 0	2,36,947 1 4	1,15,221 8 9	

## A.—VACCINATION

## STATEMENT NO. II—Showing the cost of the Department

No.	Divisions and Districts.	Expenditure.									Deputy Com- missioner's Local Funds.	Provincial Funds.	
		Contingencies.			Total Cost.								
(1)	(2)	(15)			(16)			(17)			(18)		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
ARAKAN DIVISION.													
1	Akyab ...	1,664	2	0	11,976	3	0	768	9	0			
2	Hill District of Arakan ...	111	4	0	1,800	2	0	1,800	2	0			
3	Kyaukpyu ...				5,864	7	0	5,641	7	0			
4	Sandoway ...	25	14	0	3,294	6	0	2,902	4	0			
PEGU DIVISION.													
5	Rangoon ...	14,354	4	0	21,114	15	0				840	0	0
6	Pegu ...	135	3	0	12,692	1	0						
7	Tharrawaddy ...	749	15	0	11,305	13	2						
8	Hanthawaddy ...	2,133	10	6	18,364	4	4						
9	Insein ...	265	15	0	13,287	11	9						
10	Prome ...	116	10	6	9,315	4	6						
IRRAWADDY DIVISION.													
11	Bassein ...	1,182	2	0	13,350	3	9	1,940	5	0			
12	Henzada ...	818	14	0	14,436	12	0						
13	Myaungmya ...	933	10	0	14,463	1	0						
14	Ma-ubin ...				11,071	15	0						
15	Pyapôn ...				11,237	3	0						
TENASSERIM DIVISION.													
16	Salween ...	92	6	8	4,185	6	8	4,185	6	8			
17	Thatôn ...				13,131	3	0						
18	Amherst ...	1,530	2	0	14,622	12	6	2,686	12	6			
19	Tavoy ...	5	8	0	7,341	9	0	74	0	0			
20	Mergui ...	421	1	0	6,220	9	0	623	8	0			
21	Toungoo ...	965	10	6	12,863	13	9	1,896	10	0			
MAGWE DIVISION.													
22	Thayetmyo ...	354	7	3	6,167	15	3	853	10	3			
23	Minbu ...	381	13	0	7,468	4	0	1,458	2	0			
24	Magwe ...				9,220	14	0						
25	Pakôkku ...	737	9	0	10,654	2	0	2,811	15	0			
26	Chin Hills ...	57	0	0	6,113	0	0				6,113	0	0
27	Pakôkku Hill Tracts ...				1,149	13	0				1,149	13	0

\* The average cost in column 24 is calculated on the total number of successful



## DEPARTMENT.

in the Province of Burma during the year 1928-29—contd.

Paid from				Number of all successful vaccinations and re-vaccinations by special staff only.	Average cost of each successful case.*	No.
District Council Funds.	Municipalities.	Federated Funds.	Total.			
(19)	(20)	(21)	(22)	(23)	(24)	(1)
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	
10,000 13 0	1,206 13 0	...	11,976 3 0	35,346	0 5 5	1
...	...	...	1,800 2 0	1,271	1 6 8	2
...	223 0 0	...	5,864 7 0	8,591	0 10 11	3
...	392 2 0	...	3,294 6 0	3,438	0 15 4	4
...	20,274 15 0	...	21,114 15 0	15,184	1 6 0	5
11,291 14 0	1,400 3 0	...	12,692 1 0	20,446	0 9 11	6
8,621 9 2	2,684 4 0	...	11,305 13 2	25,366	0 7 11	7
17,606 6 10	757 13 6	...	18,354 4 4	15,277	1 3 3	8
10,635 5 3	2,652 6 6	...	13,287 11 9	12,152	1 1 6	9
6,967 0 0	2,348 4 6	...	9,315 4 6	23,115	0 6 5	10
8,880 11 9	2,529 3 0	...	13,350 3 9	22,575	0 9 6	11
12,719 10 0	1,717 2 0	...	14,436 12 0	28,887	0 8 0	12
12,759 1 0	1,704 0 0	...	14,463 1 0	25,675	0 9 0	13
9,749 5 0	1,322 10 0	...	11,071 15 0	21,925	0 8 1	14
10,037 3 0	1,200 0 0	...	11,237 3 0	19,890	0 9 0	15
...	...	...	4,185 6 8	3,480	1 3 3	16
12,091 1 0	1,040 2 0	...	13,131 3 0	21,270	0 9 11	17
7,147 15 0	4,788 1 0	...	14,622 12 6	26,034	0 9 0	18
6,058 12 0	1,208 13 0	...	7,341 9 0	7,836	0 15 0	19
4,706 2 0	890 15 0	...	6,220 9 0	6,164	1 0 2	20
9,174 2 0	1,793 1 9	...	12,863 13 9	19,567	0 10 6	21
5,314 5 0	...	...	6,167 15 3	10,786	0 9 2	22
5,210 15 0	799 3 0	...	7,468 4 0	12,311	0 9 8	23
7,036 14 0	2,184 0 0	...	9,220 14 0	17,718	0 8 4	24
7,102 7 0	739 12 0	...	10,654 2 0	14,557	0 11 8	25
...	...	...	6,113 0 0	8,298	0 11 9	26
...	...	...	1,149 13 0	446	2 9 3	27

vaccinations and re-vaccinations performed by special staff only (*vide* column 23).

## A.—VACCINATION

## STATEMENT NO. II—Showing the cost of the Department

No.	Divisions and Districts.	Expenditure.						Deputy Com- missioner's Local Funds.	Provincial Funds.				
		Contingencies.			Total Cost.								
(1)	(2)	(15)			(16)			(17)	(18)				
	MANDALAY DIVISION.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
28	Mandalay ...	969	10	0	12,211	5	0	663	9	0	636	0	0
29	Kyauksè ...	229	14	0	4,216	4	0	...			...		
30	Meiktila ...	377	1	0	4,230	5	0	...			...		
31	Myingyan ...	638	8	0	7,091	7	0	...			...		
32	Yamèthin ...	655	2	0	7,652	0	0	...			...		
	SAGAING DIVISION.												
33	Bhamo ...	231	10	0	2,229	6	0	1,684	7	0	...		
34	Myitkyina ...	...			2,090	1	0	2,090	1	0	...		
35	Shwebo ...	...			9,253	7	0	...			...		
36	Sagaing ...	...			6,431	7	0	...			...		
37	Katha ...	...			7,715	6	0	7,715	6	0	...		
38	Upper Chindwin ...	99	6	0	7,741	5	0	7,741	5	0	...		
39	Lower Chindwin ...	439	9	0	8,451	11	0	...			...		
	FEDERATED SHAN STATES.												
40	Northern Shan States ...	1,820	3	9	14,969	11	9	...			...		
41	Southern Shan States ...	2,038	9	6	23,360	3	6	...			...		
	OTHERS.												
42	Meiktila Vaccine Depôt ...	21,014	0	1	37,697	2	1	...			37,697	2	1
43	Office of Director of Public Health, Burma.	1,007	8	0	1,007	8	0	...			1,007	8	0
	TOTAL ...	† 56,558	2	9	† 4,29,062	6	0	47,537	7	5	47,443	7	1
	TOTAL, FOR 1927-28 ...	37,081	0	8	4,03,228	12	3	43,619	10	7	44,861	3	6
	TOTAL, FOR 1926-27 ...	34,077	0	0	3,86,245	10	1	41,327	14	0	37,095	13	9

\* The average cost in column 24 is calculated on the total number of successful  
(a) No share of pay of 21 Assistant Registrar-Vaccinators of Rangoon employed in Rangoon Cantonment

(b) This includes 28 Sub-Assistant Surgeons, 3 Private Medical Practitioners who are receiving vaccinations  
42 Inspectors of Vaccination, 3 Head Vaccinators  
† Includes Rs. 36,215-11-0 paid by Local Bodies



## DEPARTMENT.

in the Province of Burma during the year 1928-29—concl'd.

Paid from				Number of all successful vaccinations and re-vaccinations by special staff only.	Average cost of each successful case.	No.
District Council Funds.	Municipalities.	Federated Funds.	Total.			
(19)	(20)	(21)	(22)	(23)	(24)	(1)
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	
4,722 6 0	6,189 6 0	...	12,211 5 0	22,399	0 8 9	28
3,820 2 0	396 2 0	...	4,216 4 0	5,995	0 11 3	29
3,702 5 0	528 0 0	...	4,230 5 0	11,251	0 6 0	30
6,003 7 0	1,088 0 0	...	7,091 7 0	13,101	0 8 8	31
6,255 8 0	1,396 8 0	...	7,652 0 0	24,624	0 5 0	32
...	544 15 0	...	2,229 6 0	2,353	0 15 2	33
...	...	...	2,090 1 0	2,206	0 15 2	34
8,653 7 0	600 0 0	...	9,253 7 0	21,115	0 7 0	35
5,503 7 0	928 0 0	...	6,431 7 0	20,100	0 5 1	36
...	...	...	7,715 6 0	12,917	0 9 7	37
...	...	...	7,741 5 0	6,324	1 3 7	38
8,101 5 0	350 6 0	...	8,451 11 0	19,187	0 7 1	39
...	...	14,969 11 9	14,969 11 9	38,307	0 6 3	40
...	430 0 0	22,930 3 6	23,360 3 6	25,210	0 14 10	41
...	...	...	37,697 2 1	...	...	42
...	...	...	1,007 8 0	...	...	43
2,29,873 7 0	66,308 1 3	37,899 15 3	4,29,062 6 0	6,52,694	0 9 7	
2,26,320 2 11	55,195 1 4	33,232 9 11	4,03,228 12 3	5,84,121	0 11 1	
2,24,857 13 7	49,523 2 9	33,440 14 0	3,86,245 10 1	5,33,458	0 11 7	

vaccinations and re-vaccinations performed by special staff only (*vide* column 23).

Corporation have been included in the cost. Out of 22 only 1 Vaccinator was paid by Government.

allowance, or who have been appointed as whole-time officers for supervising vaccination and vital statistics work, and 13 Public Health Inspectors.

for Government vaccine lymph.

COMPARATIVE STATEMENT NO. III—*Showing the number of persons vaccinated in the Province of Burma in*

Establishments.	Persons prima									
	Total number.	Number success-fully vacci-nated.	Total number.	Number success-fully vacci-nated.	Total number.	Number success-fully vacci-nated.	Total number.	Number success-fully vacci-nated.	Total number.	Number success-fully vacci-nated.
	1919-20.		1920-21.		1921-22.		1922-23.		1923-24.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Government.	179,204	162,448	165,491	152,910	174,549	160,011	196,950	180,625	180,459	168,357
Municipal	38,604	35,973	35,519	33,224	40,478	38,460	41,884	39,932	41,977	39,974
Local Funds.	257,218	239,580	272,949	256,940	262,388	247,532	270,396	256,235	274,439	261,999
Federated States.	9,177	5,045	7,280	5,155	10,234	8,695	10,643	10,559	45,671	43,552
Dispensary	7,220	4,781	2,016	1,565	3,601	3,068	2,883	2,178	4,534	3,673
Other Agencies.	398	371	267	217	3,589	3,285	1,007	857	974	695
Total ...	491,821	448,198	483,522	450,011	494,839	461,051	523,763	490,386	548,054	518,250



*primarily vaccinated and the number of those persons who were successfully each of the undermentioned official years.*

rily vaccinated.

Total number.	Number success- fully vacci- nated.	Total number.	Number success- fully vacci- nated.	Total number.	Number success- fully vacci- nated.	Total number.	Number success- fully vacci- nated.	Total number.	Number success- fully vacci- nated.	Establish- ments.
1924-25.		1925-26.		1926-27.		1927-28.		1928-29.		
(7)		(8)		(9)		(10)		(11)		(12)
6,806	4,997	5,673	3,850	5,141	3,745	7,770	5,922	10,137	8,478	Government.
49,378	47,231	45,781	43,895	45,208	41,841	47,479	42,732	51,565	47,819	Municipal.
424,954	402,000	436,679	411,970	419,711	387,665	432,745	380,584	473,466	440,571	Local Funds.
48,476	44,673	67,872	64,245	39,998	38,864	60,034	52,837	71,051	57,133	Federated States.
6,116	5,175	3,759	2,789	3,574	1,890	6,368	2,157	7,105	2,532	Dispen- sary.
537	523	287	260	280	253	253	229	372	356	Other Agencies.
536,267	504,599	560,051	527,009	513,912	474,258	554,649	484,461	613,696	556,889	Total.

STATEMENT NO. IV—*Showing particulars of Vaccination verified*

No.	Districts.	Total number of persons vaccinated.		Total number inspected			
				By Assistant Director of Public Health or Civil Surgeons		By Inspectors of Vaccination or other Inspecting Officers.	
		Primary.	Re-vaccinations.	Primary.	Re-vaccinations.	Primary.	Re-vaccinations.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Akyab ...	24,175	40,075	398	612	7,199	18,188
2	Hill District of Arakan	1,328	741	30	26	60	36
3	Kyaukpyu	8,879	2,162	1,216	26	2,841	723
4	Sandoway	4,232	1,545	604	166	1,986	386
5	Rangoon	9,962	29,253	1,271	5,771	7,447	18,981
6	Pegu ...	18,833	13,065	3,403	978	16,120	7,584
7	Tharrawaddy	22,869	11,559	1,255	229	16,614	5,377
8	Hanthawaddy	15,046	4,333	297	132	10,729	1,362
9	Insein ...	12,272	4,016	405	14	8,013	1,912
10	Prome	21,902	6,207	3,028	58	9,881	559
11	Bassein	20,911	6,386	1,240	278	9,492	2,344
12	Henzada	29,062	4,008	1,071	59	14,161	1,126
13	Myaungmya	24,733	8,198	486	26	17,080	4,408
14	Ma-ubin	21,074	8,156	3,761	292	18,726	5,110
15	Pyapôn	19,176	5,486	1,818	257	16,454	4,006
16	Salween	3,957	4,223	789	519	2,378	2,603
17	Thatôn	20,616	10,974	1,819	595	9,366	3,696
18	Amherst	22,417	29,115	4,417	2,554	9,162	7,562
19	Tavoy ...	7,529	853	4,749	337	6,357	664
20	Mergui	6,504	2,179	1,121	920	3,511	797
21	Toungoo	17,804	13,135	1,006	273	7,447	5,681
22	Thayetmyo	10,101	2,898	189	74	2,885	1,130
23	Minbu	12,596	55	1,024	...	5,102	10
24	Magwe	15,482	12,220	4,901	3,036	8,324	4,195
25	Pakôkku	15,253	6,514	783	221	6,093	3,290
26	Chin Hills	9,082	1,839	3,345	239	6,284	628
27	Pakôkku Hill Tracts	481	354	...	...	...	...
28	Mandalay	16,834	17,304	2,589	345	10,402	765
29	Kyauksè	5,652	1,442	370	31	3,870	926
30	Meiktila	11,224	5,947	3,259	581	6,461	1,464
31	Myingyan	13,784	6,713	...	...	5,595	1,529
32	Yamèthin	19,742	24,409	913	793	9,397	8,323
33	Bhamo	3,239	750	164	45	...	...
34	Myitkyina	5,440	869	161	247	...	...
35	Shwebo	18,331	10,452	783	189	5,443	3,241
36	Sagaing	17,137	10,279	5,257	359	14,352	2,725
37	Katha ...	12,992	1,483	4,705	848	5,856	851
38	Upper Chindwin ...	6,004	1,591	1,048	676	4,033	1,354
39	Lower Chindwin ...	13,759	9,452	720	1,044	6,582	4,258
40	Northern Shan States	36,005	5,718	9,844	1,837	1,003	134
41	Southern Shan States	37,277	7,107	...	...	15,293	2,746
TOTAL		613,696	333,065	74,239	24,687	311,999	130,674
TOTAL FOR 1927-28		554,649	323,095	48,477	25,897	286,874	152,078
TOTAL FOR 1926-27		513,912	210,317	45,208	15,453	271,222	100,776



by Inspecting Officers during the year 1928-29 (Paragraph 13).

Percentage of inspections to total number vaccinated				Percentage of cases found successful of total number inspected				Percentage of success reported by persons performing Vaccinations.		No.
By Assistant Director of Public Health or District Health Officers.		By Inspectors of Vaccination or other Inspecting Officers.		By Assistant Director of Public Health or District Health Officers.		By Inspectors of Vaccination or other Inspecting Officers.				
Primary.	Re-vaccinations.	Primary.	Re-vaccinations.	Primary.	Re-vaccinations.	Primary.	Re-vaccinations.	Pri- mary.	Re- vaccina- tions.	
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(1)
1.65	1.53	29.78	45.38	64.07	19.44	80.55	25.31	92.89	42.43	1
2.26	3.51	4.52	4.86	60.00	57.69	90.00	83.33	88.80	47.78	2
13.70	1.20	32.00	33.44	82.89	11.54	84.72	27.25	93.96	42.08	3
14.27	10.74	46.93	24.98	89.90	18.07	90.58	10.36	86.35	8.43	4
12.76	19.73	74.75	64.89	98.19	48.02	98.58	48.20	98.75	37.96	5
18.07	7.49	85.59	58.05	97.88	19.84	99.35	29.94	99.25	32.42	6
5.49	1.98	72.65	46.52	100.00	99.98	26.64	36.52	99.98	44.35	7
1.97	3.05	71.31	31.43	95.29	28.79	94.78	20.12	95.16	31.12	8
3.30	0.35	65.29	47.61	95.56	21.43	98.24	11.98	97.11	33.87	9
13.83	0.93	45.11	9.01	99.34	27.59	99.47	29.70	99.36	30.98	10
5.93	4.35	45.39	36.71	98.79	45.32	97.48	41.13	98.06	53.35	11
3.69	1.47	48.73	28.09	97.39	50.85	98.88	15.54	99.51	20.42	12
1.96	0.32	69.06	53.77	35.60	76.92	79.36	35.14	100.00	37.50	13
17.85	3.58	88.86	62.65	99.81	4.11	99.90	13.27	99.88	14.26	14
9.48	4.68	85.81	73.02	99.89	13.23	99.55	22.62	99.03	20.61	15
19.94	12.29	60.10	61.64	94.93	27.75	96.34	28.51	93.85	30.73	16
8.82	5.42	45.43	33.68	96.04	28.24	98.38	18.37	97.97	29.36	17
19.70	8.77	40.87	25.97	98.60	16.72	98.56	14.47	99.07	17.71	18
63.08	39.51	84.43	77.84	95.47	53.12	96.84	31.02	97.07	47.14	19
17.24	42.22	53.98	36.58	93.40	59.78	88.64	33.88	85.76	40.38	20
5.65	2.08	41.83	43.25	99.60	33.70	97.95	24.54	99.13	25.99	21
1.87	2.55	28.56	38.99	89.42	82.43	90.36	48.41	96.27	53.28	22
8.13	...	40.50	18.18	97.66	...	97.59	...	97.12	34.69	23
31.66	24.84	53.77	34.33	96.20	30.83	95.07	29.18	98.53	30.22	24
5.13	3.39	39.95	50.51	90.68	6.79	90.04	16.78	92.29	14.21	25
36.83	13.00	69.19	34.15	81.97	55.23	82.42	48.57	82.75	46.00	26
...	...	...	...	...	...	...	...	91.31	23.95	27
15.38	1.99	61.79	4.42	61.26	62.03	86.37	36.99	96.57	37.82	28
6.55	2.15	68.47	64.22	99.46	29.03	99.41	47.52	99.41	49.28	29
29.04	9.77	57.56	24.62	96.59	34.08	94.55	46.45	92.44	44.95	30
...	...	40.59	22.78	...	...	82.63	10.86	97.76	20.52	31
4.62	3.25	47.60	34.10	87.51	39.47	95.59	34.23	96.58	35.99	32
5.06	6.00	...	...	90.24	44.44	...	...	93.79	35.75	33
2.96	28.42	...	...	96.27	83.81	...	...	93.96	67.78	34
4.27	1.81	29.69	31.01	93.74	55.56	89.62	58.65	95.23	61.09	35
30.68	3.49	83.75	26.51	98.21	31.75	97.64	46.02	98.25	47.61	36
36.21	57.18	45.07	57.38	92.90	35.14	96.26	21.86	98.48	26.05	37
17.46	42.49	67.17	85.10	84.64	44.97	85.97	39.81	94.03	49.17	38
5.23	11.05	47.84	45.05	97.64	67.43	94.88	67.10	94.98	67.20	39
27.34	32.13	2.79	2.34	98.81	82.42	100.00	8.21	98.90	75.21	40
...	...	41.03	38.64	...	...	23.15	1.57	97.08	29.58	41
12.10	7.41	50.84	39.23	94.16	41.22	91.15	31.67	97.11	36.22	
8.74	8.02	51.72	47.07	92.08	47.75	91.37	37.91	92.16	39.88	
8.80	7.35	52.78	47.92	91.77	45.07	95.76	32.79	96.63	35.97	

APPENDIX A.—*Statement showing the ratio per 10,000 successfully vaccinated and the mortality from Small-pox by quinquennial periods.*

Official Year.	Ratio per 10,000 successfully vaccinated.	Quinquennial mean.	Calendar Year.	Ratio per 10,000 of mortality from small-pox.	Quinquennial mean.
(1)	(2)	(3)	(4)	(5)	(6)
1913-14 ...	367·34	348·50	1913 ...	2·86	·93
1914-15 ...	332·06		1914 ...	·26	
1915-16 ...	330·70		1915 ...	·22	
1916-17 ...	365·25		1916 ...	·72	
1917-18 ...	347·10		1917 ...	·57	
1918-19 ...	392·57	439·47	1918 ...	·76	1·95
1919-20 ...	524·21		1919 ...	3·99	
1920-21 ...	443·70		1920 ...	2·90	
1921-22 ...	408·22		1921 ...	·92	
1922-23 ...	431·94		1922 ...	1·34	
1923-24 ...	456·24	450·73	1923 ...	2·63	2·45
1924-25 ...	466·23		1924 ...	2·31	
1925-26 ...	477·33		1925 ...	3·56	
1926-27 ...	407·11		1926 ...	2·16	
1927-28 ...	446·76		1927 ...	1·57	
1928-29 ...	498·14		1928 ...	2·61	



APPENDIX B.—Statement showing the number of vaccinations performed in Municipal Towns and Notified Areas (to which Vaccination Act has been extended) on children under one year of age (Paragraph 8).


Towns.		Number of births during the year 1928-29.	Number of deaths among children under one year during the year.	Number of successful operations on children under one year during the year ending 31st March 1929.	Date of extension of Vaccination Act of 1880.	Date of extension of Vaccination Law Amendment Act of 1909.
(1)		(2)	(3)	(4)	(5)	(6)
Akyab	...	608	163	345	August 1883 ...	29th March 1910.
Kyaukpyu	...	102	27	63	April 1894 ...	Do.
Sadoway	...	114	20	66	September 1890	Do.
Rangoon	...	7,568	2,575	6,702	April 1884 ...	1st May 1909.
Pegu	...	713	197	912	March 1893 ...	29th March 1910.
Nyaunglèbin	...	170	106	211	29th March 1910	Do.
Tharrawaddy	...	141	29	178	October 1897.	
Thônzè	...	345	57	427	Do. ...	29th March 1910.
Zigôn	...	171	45	152	11th May 1914 ...	9th Sept. 1915.
Letpadan	...	275	65	195	January 1897 ...	29th March 1910.
Gyobingauk	...	177	66	108	February 1897 ...	Do.
Minhla	...	100	13	103	11th May 1914 ...	9th Sept. 1915.
Nattalin	...	130	12	114	Do. ...	Do.
Syriam	...	341	63	268	29th January 1913	29th January 1913.
Thôngwa	...	259	42	87	3rd March 1914	3rd March 1914.
Insein	...	314	99	413	14th March 1912	14th March 1912.
Thamaing	...	71	21	82	26th May 1926 ...	26th May 1926.
Thingangyun	...	118	22	94	Do. ...	Do.
Kanbe	...	127	45	126	Do. ...	Do.
Kamayut	...	100	35	109	Do. ...	Do.
Prome	...	793	96	1,160	June 1890 ...	29th March 1910.
Shwedaung	...	232	54	126	10th Sept. 1917.	
Paungdè	...	269	41	180	August 1890 ...	29th March 1910.
Bassein	...	1,342	446	1,429	September 1888	Do.
Ngathainggyaung	...	136	32	72	February 1890 ...	Do.
Kyônpyaw	...	153	44	131	26th Dec. 1923.	
Henzada	...	703	216	534	January 1889 ...	29th March 1910.
Myanaung	...	229	58	127	July 1889 ...	Do.
Kyangin	...	219	48	170	August 1894 ...	Do.
Myaungmya	...	183	66	116	June 1894 ...	Do.
Wakèma	...	274	88	105	27th April 1907 ...	Do.
Mawlamyainggyun...	...	195	85	127	20th July 1925 ...	20th July 1925.
Ma-ubin	...	211	81	217	October 1891 ...	29th March 1910.
Yandoon	...	259	58	222	January 1892 ...	Do.

APPENDIX B.—Statement showing the number of vaccinations performed in Municipal Towns and Notified Areas (to which Vaccination Act has been extended) on children under one year of age (Paragraph 8)—concl'd.

Towns.		Number of births during the year 1928-29.	Number of deaths among children under one year during the year.	Number of successful operations on children under one year during the year ending 31st March 1929.	Date of extension of Vaccination Act of 1880.	Date of extension of Vaccination Law Amendment Act of 1909.
(1)		(2)	(3)	(4)	(5)	(6)
Danubyu	...	158	36	212	9th July 1909.	
Pyapôn	...	176	60	454	November 1904	29th March 1910.
Kyaiklat	...	204	78	110	15th Dec. 1904 ...	Do.
Thatôn	...	515	110	295	October 1891 ...	Do.
Kyaikto	...	191	57	152	March 1897 ...	Do.
Moulmein	...	1,629	359	1,657	August 1885 ...	Do.
Kawkareik	...	296	158	87	September 1914	17th Sept. 1914.
Tavoy	...	898	192	842	December 1889	29th March 1910.
Mergui	...	558	157	450	October 1891 ...	Do.
Toungoo	...	498	73	269	May 1889 ...	Do.
Shwegyin	...	188	27	59	January 1890 ...	Do.
Pyu	...	234	33	43	January 1920 ...	17th January 1920.
Thayetnyo	...	153	90	175	May 1889 ...	29th March 1910.
Allanmyo	...	201	76	189	May 1901 ...	Do.
Minbu	...	204	69	145	March 1896 ...	Do.
Salin	...	256	98	110	Do. ...	Do.
Magwe	...	205	101	178	10th March 1913	10th March 1913.
Taungdwingyi	...	269	138	86	February 1893 ...	29th March 1910.
Yenangyaung	...	329	126	214	10th March 1913	10th March 1913.
Chauk	...	73	53	39	20th May 1929 ...	
Pakôkku	...	493	283	282	April 1892 ...	29th March 1910.
Mandalay	...	7,509	2,153	7,903	August 1891 ...	Do.
Maymyo	...	691	167	431	October 1912 ...	22nd October 1912.
Kyauksè	...	251	65	262	May 1894 ...	29th March 1910.
Meiktila	...	293	128	284	June 1906 ...	31st July 1922.
Myingyan	...	591	218	320	September 1891	29th March 1910.
Nyaung-u	...	169	29	136	30th August 1921	30th August 1921.
Yamèthin	...	280	88	134	February 1892 ...	29th March 1910.
Pyinmana	...	496	197	419	November 1891...	Do.
Pyawbwè	...	173	67	132	May 1912.	
Bhamo	...	220	35	87	26th October 1894	29th March 1910.
Myitkyina	...	213	40	27	6th May 1929.	
Shwebo	...	453	182	291	June 1894 ...	29th March 1910.
Ye-u	...	144	35	9	2nd April 1929.	
Sagaing	...	386	152	229	April 1894 ...	29th March 1910.
Myinmu	...	134	63	183	5th October 1926	5th October 1926.
Mônnywa	...	328	140	213	March 1893 ...	29th March 1910.
Lashio	...	159	42	34	25th July 1927 ...	25th July 1927.
Taunggyi	...	233	16	94	Do. ...	Do.
Total	...	37,593	11,306	32,707		



[illegible]

 Indicates proportion of population protected per 10,000.

Indicates ratio of deaths from small-pox per 10,000 of population.



2





